

***Central Facilities Area
Landfills I, II, and III Annual
Monitoring Report (2003)***

**Idaho
Completion
Project**

Bechtel BWXT Idaho, LLC

October 2004

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**Idaho Completion Project
Idaho Falls, Idaho 83415**

**Prepared for the
U.S. Department of Energy
Assistant Secretary for Environmental Management
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ABSTRACT

This report summarizes the 2003 monitoring data collected from Landfills I, II, and III at the Central Facilities Area of the Idaho National Engineering and Environmental Laboratory. Landfill monitoring is conducted to ensure that the environmental remedy selected under the record of decision for the landfills is operating as designed.

Soil-gas, groundwater, and soil-moisture data were collected and analyzed. The soil-gas monitoring consisted of collecting one round of samples from five locations and four depths at each location for a total of 20 samples. The groundwater monitoring consisted of sampling nine wells for volatile organic compounds, metals, and anions. The soil-moisture monitoring consisted of gathering neutron-probe data from five locations and time-domain reflectometry data from four deep-profile locations.

The January 2004 water-level map indicates a local groundwater flow direction of southeast for Landfill II and south to southwest for Landfills I and III. The groundwater flow directions and gradients are consistent with past measurements.

The groundwater data indicated that nitrate was the only analyte detected above a maximum contaminant level. Nitrate was detected above its maximum contaminant level of 10 mg/L in wells CFA-MON-A-002 (21.3 mg/L-N) and CFA-MON-A003 (11.1 mg/L-N). The nitrate concentrations in these wells have remained relatively steady over time. Groundwater gradients indicate that the nitrate in these wells is migrating away from the production wells at the Central Facilities Area.

The data for nitrogen and oxygen isotope ratios in nitrate indicate a non-sewage source for the nitrate. These data suggest that the CFA-04 dry pond is a better candidate than the former CFA-08 sewage drainfield as the source of the nitrate contamination in wells CFA-MON-A-002 and -003. This conclusion supports the flow paths indicated by water-level data. Iron was detected above its secondary maximum contaminant level of 300 µg/L in two samples, and aluminum was detected above its secondary maximum contaminant level of 200 µg/L in one sample. Both the iron and the aluminum are probably due to suspended particulates or, in the case of iron, possibly well materials.

The soil-gas monitoring showed that most analytes were within their historical ranges. The primary soil-gas contaminants—chlorinated solvents, their degradation products, and freons—were not detected in groundwater and, therefore, do not appear to be affecting it. However, the revised groundwater gradients presented in this report, the five-year review, and the previous monitoring report indicate that the current groundwater-monitoring system at the landfills might not provide enough coverage to ensure that the groundwater samples represent groundwater quality downgradient of the landfills. Installation of additional monitoring wells is planned to address this issue. The analytes that most frequently exceeded their historical ranges were tetrachloroethene, dichlorodifluoromethane, and trichlorofluoromethane. The compound occurring at the highest concentrations was 1,1,1-trichloroethane at GSP3-1 at Landfill III at 13,000 parts per billion by volume (ppbv). 1,1,1-trichloroethane was detected at levels above 2,000 ppbv at GSP1-1 at Landfill I and GSP3-2 at Landfill III.

Other compounds occurring above 2,000 ppbv include trichlorofluoromethane (2,700 ppbv at GSP3-2), 1,1-dichloroethane (2,500 ppbv at GSP2-2 at Landfill II), and dichlorodifluoromethane (2,100 ppbv at GSP3-2 at Landfill III).

The soil-moisture monitoring at Landfills II and III indicated no recharge, and no recharge occurred at the background location near the edge of Landfill II.

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ACRONYMS

bls	below land surface
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFA	Central Facilities Area
EPA	Environmental Protection Agency
ET	evapotranspiration
FFA/CO	Federal Facility Agreement and Consent Order
INEEL	Idaho National Engineering and Environmental Laboratory
INTEC	Idaho Nuclear Technology and Engineering Center
MCL	maximum contaminant level
NAT	neutron-probe access tube
NOAA	National Oceanic and Atmospheric Administration
OU	operable unit
ppbv	parts per billion by volume
ppmv	parts per million by volume
PRG	preliminary remediation goal
ROD	record of decision
SDA	Subsurface Disposal Area
SMCL	secondary maximum contaminant level
SRPA	Snake River Plain Aquifer
STF	Security Training Facility
TDR	time-domain reflectometry
USGS	United States Geological Survey
VOC	volatile organic compound
WAG	waste area group

Central Facilities Area Landfill I, II, and III Annual Monitoring Report (2003)

1. INTRODUCTION AND PURPOSE

This report presents the results of monitoring conducted to ascertain the effectiveness of the remedial action at Landfills I, II, and III located at the Central Facilities Area (CFA) of the Idaho National Engineering and Environmental Laboratory (INEEL) (see Figure 1). These results are from groundwater and soil-gas monitoring conducted during 2003 and soil-moisture monitoring conducted from October 2002 to October 2003.

This monitoring supports the Operable Unit (OU) 4-12 record of decision (ROD) (DOE-ID 1995), which designates “containment” as the environmental remedy for the CFA landfills. In addition, the groundwater monitoring, in particular the monitoring of nitrate, supports the OU 4-13 comprehensive ROD (DOE-ID 2000a). Previous monitoring results are reported in the five-year review (DOE-ID 2002a). This report does not address institutional controls and land-use restrictions.

Post-remedial action monitoring required by the OU 4-12 ROD (DOE-ID 1995) is being carried out per the *Post Record of Decision Monitoring Work Plan Central Facilities Area Landfills I, II, and III Operable Unit 4-12* (INEEL 2003a) and the *Field Sampling Plan for the Post Record of Decision Monitoring Central Facilities Area Landfills I, II, and III Operable Unit 4-12* (INEEL 2003b). The results of the remedial action are summarized in the *Remedial Action Report CFA Landfills I, II, and III Native Soil Cover Project Operable Unit 4-12* (DOE-ID 1997).

1.1 Regulatory Background

The Federal Facility Agreement and Consent Order (FFA/CO) and its associated action plan (DOE-ID 1991) were negotiated and signed by the Department of Energy-Idaho Operations Office, the Environmental Protection Agency (EPA), and the Idaho Department of Health and Welfare (i.e., the Agencies) in December 1991 to implement remediation of the INEEL under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The goals of the FFA/CO are to ensure (a) potential or actual INEEL releases of contaminants to the environment are thoroughly investigated in accordance with the “National Oil and Hazardous Substances Pollution Contingency Plan (40 CFR 300)” and (b) appropriate response actions are taken to protect human health and the environment.

The FFA/CO established the procedural framework and schedule for developing, prioritizing, implementing, and monitoring response actions at the INEEL in accordance with CERCLA, the Resource Conservation and Recovery Act, and the Idaho Hazardous Waste Management Act. The FFA/CO is consistent with the general approach, approved by the EPA and Department of Energy, where agreements with states as full partners would allow site investigation and cleanup to proceed using a uniform set of regulations for all states in order to minimize conflicting requirements and maximize limited remediation resources. For management purposes, the FFA/CO divided the INEEL into 10 waste area groups (WAGs).

CFA, designated as WAG 4, incorporated 13 OUs originally containing a total of 44 individual release sites. After publication of the FFA/CO, eight additional sites were formally assigned to OUs within WAG 4. In total, 52 sites are incorporated in the OU 4-13 comprehensive remedial investigation/feasibility study for WAG 4 (DOE-ID 2000b). OU 4-12 consisted of the three inactive

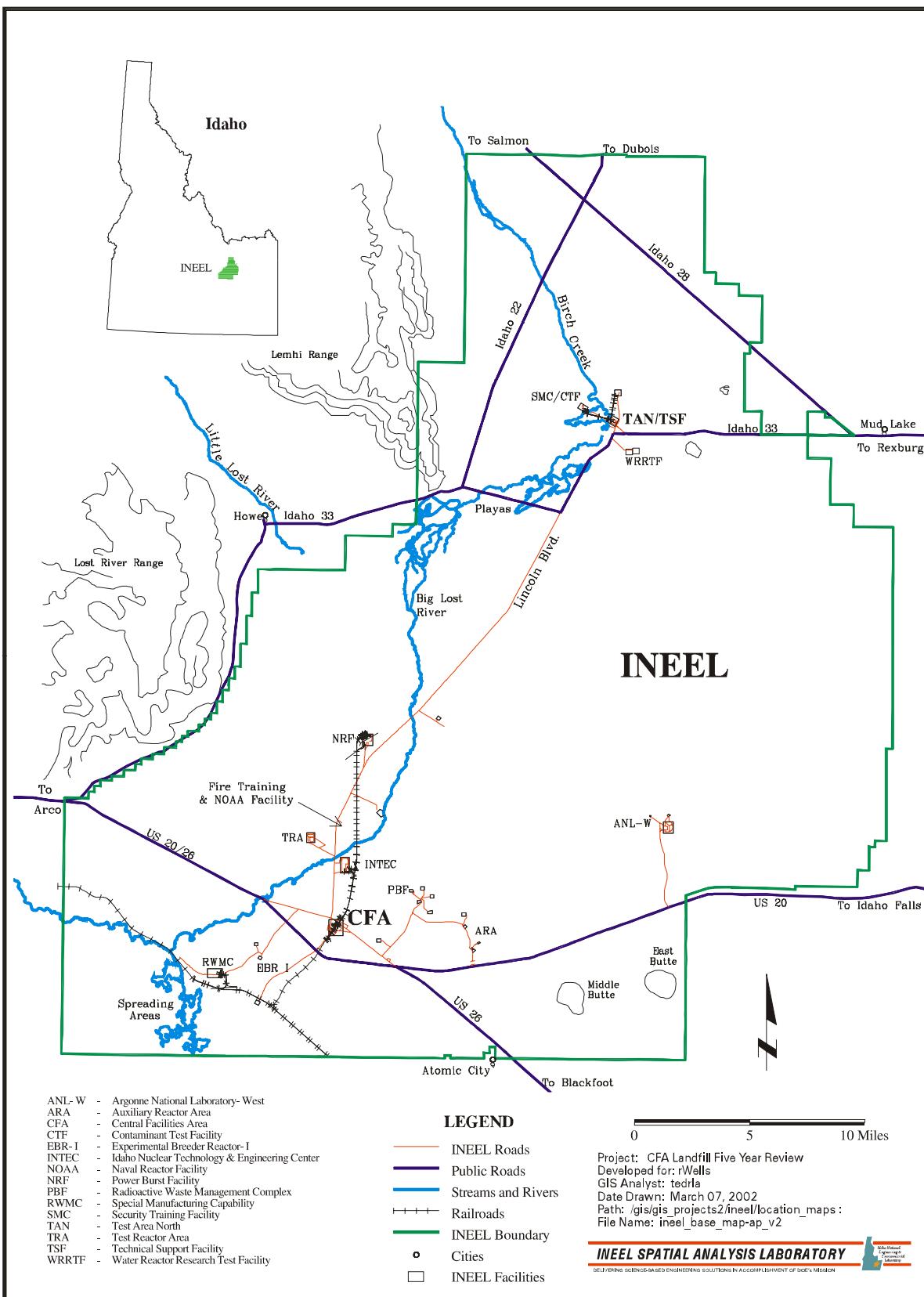


Figure 1. Location of CFA (WAG 4) at the INEEL.

CFA landfills. The OU 4-12 ROD (DOE-ID 1995) documented that the risk associated with the CFA landfills was found to be within the generally accepted limits of CERCLA or Superfund (i.e., the risk assessment indicated that the landfills do not pose an unacceptable threat to human health and the environment). As is typical for landfills, uncertainty about the waste disposal history resulted in uncertainty about future risk, particularly as it relates to the potential for contaminant migration through leaching and cover erosion. Therefore, containment—a remedial action consistent with the EPA's presumptive remedy guidance for CERCLA municipal landfills—was warranted for the CFA landfills.

The requirement for monitoring the landfills was established in the OU 4-12 ROD (DOE-ID 1995). The remedial design specified the manner in which monitoring of groundwater, cover infiltration, and the vadose zone would be carried out (DOE-ID 1996). The post-ROD monitoring work plan was designed to provide data for use in evaluating whether the remedial action objectives stated in the ROD are being met (INEEL 2003a).

1.2 Physical Characteristics

The CFA landfills are located on the Eastern Snake River Plain in Big Lost River alluvial deposits overlying basalt bedrock. The sediments composing these deposits are primarily sands and gravels and contain very few fine-grained materials. In some places, however, a clay-rich layer up to 9 ft thick exists above the bedrock (Ansley et al. 1988). The depth to basalt at these landfills ranges from 10 to 37 ft.

The vadose zone—the portion of the subsurface extending from the land surface to the water table—at the CFA landfills is approximately 480 ft thick. The vadose zone is composed of a relatively thin layer of surface sediments (where wastes were disposed of) and thick sequences of interfingering basalt flows that contain interbedded sediments. The vadose zone soils at the landfills tend to be relatively dry during most of the year because of the relatively low annual precipitation, high potential evapotranspiration (ET), and deep water table. The spring snowmelt is the greatest source of water available for infiltration to the landfills. The Snake River Plain Aquifer (SRPA), one of the largest and most productive groundwater resources in the United States, underlies the CFA landfills. The SRPA is listed as a Class I aquifer, and the EPA has designated it as a sole-source aquifer. The SRPA consists of a series of saturated basalt flows and interlayered pyroclastic and sedimentary materials that underlie the Eastern Snake River Plain.

1.2.1 CFA Landfill I

CFA Landfill I occupies a total surface area of approximately 8.25 acres and consists of three subunits: the rubble landfill, western waste trench, and northern waste trench (Figure 2). The rubble landfill originated as a gravel quarry that was operated by the U.S. Navy from 1942 to 1949. The quarry was used as a disposal area for sitewide waste sometime after 1949. Wastes were discarded in the landfill from the 1950s to 1984. The surface area of the rubble landfill is estimated to be 5.5 acres, and its depth is estimated to be 12 to 15 ft. Before a new cover was installed, the rubble landfill was covered with approximately 1 to 5 ft of soil overlain with a layer of gravel. The surface area of the western waste trench is approximately 2 acres and consists of smaller waste trenches, each excavated to a size of 8 ft wide × 50 ft long × 10 ft deep. The western waste trench is west of the present-day road separating Landfills I and III and is actually covered by the Landfill III cap. Each of the smaller trenches is separated from the other by 15 ft of undisturbed soil. Filled trenches were covered with 1 to 5 ft of soil. The northern waste trench was identified from aerial photographs and has a surface area of approximately 0.75 acres.

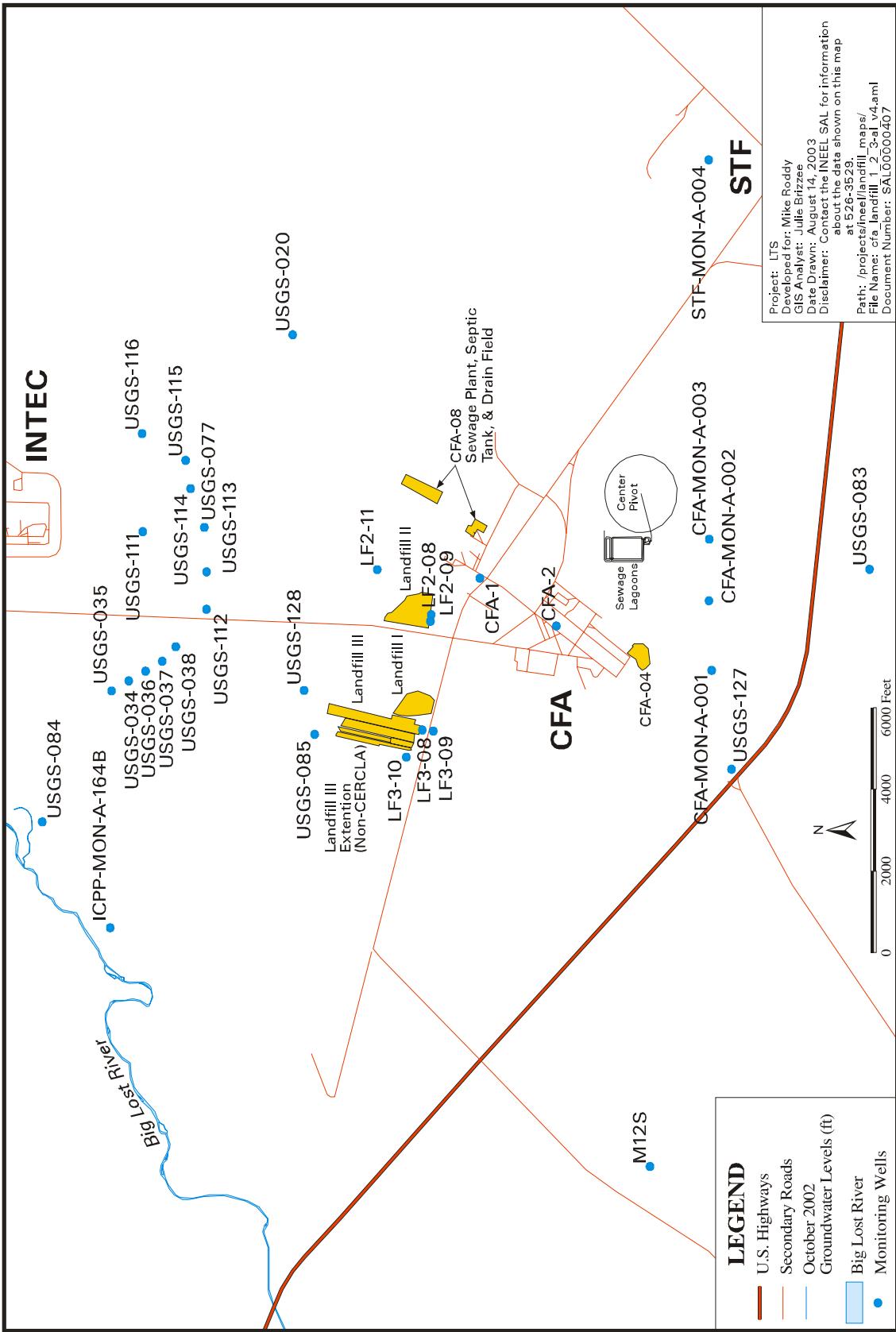


Figure 2. Locations of CFA landfills and groundwater monitoring wells.

1.2.2 CFA Landfill II

CFA Landfill II encompasses approximately 15 acres and is located in the southwest corner of an abandoned gravel pit (Figure 2). It received waste from September 1970 until it was closed in September 1982. Depth to basalt at this landfill varies from 15 to 37 ft based on a seismic refraction survey and a subsurface borehole drilling investigation. However, the landfill waste profile is estimated to range in depth from 12 to 28 ft, because the pit was probably not excavated beyond the base of the gravel-bearing unit and into the clay material. Hand augering at 60 sampling sites indicated the original CFA Landfill II soil cover ranged in thickness from 0.33 to 3.17 ft, with an overall mean of 1.5 ft. Before installation of the new cover, the landfill surface was gently undulating (due to differential settling of the waste) and covered with a stand of crested wheatgrass.

1.2.3 CFA Landfill III

CFA Landfill III consists of six trenches that cover approximately 12 acres (Figure 2). It opened in October 1982, after CFA Landfill II was closed, and operated until December 1984. Depth to the underlying basalt is 10 to 33 ft based on a seismic refraction survey. The landfill waste profile is estimated to be 13 ft deep on average. It was common practice to excavate the landfill trenches, leaving a soil layer intact between the waste and underlying basalt. The original CFA Landfill III soil cover ranged in thickness from 1 to 8 ft, with an overall mean of 2.83 ft, based on augering results. Ground-penetrating radar measurements estimate the average original soil cover thickness to be 2 to 3 ft. Before installation of the new cover, the landfill surface was gently undulating (due to differential settling of the waste) and covered with a stand of crested wheatgrass.

1.3 Description of Remedial Action

Based on CERCLA requirements, the detailed analysis of alternatives, and public comments, the Agencies selected uniform containment with a native soil cover, institutional controls, and monitoring as the most appropriate environmental remedy for the CFA landfills. Containment with a native soil cover is believed to be the best alternative for minimizing public risk and providing long-term protection of the SRPA.

The major components of the remedy included (a) placing a uniform native soil cover over Landfills I, II, and III; (b) implementing institutional controls; and (c) periodic monitoring of groundwater, infiltration, and the vadose zone.

The native soil cover consisted of three layers: (a) a general backfill layer that brought the existing grade up to the design slope (rough grade), (b) a compacted low-permeability soil layer (approximately 12 in. thick), and (c) a topsoil layer (approximately 6 in. thick) that created the final grade and allows for growth of a vegetative cover (Figure 3). To install the cover over each landfill, the landfill was initially grubbed to remove plants that could decompose and create voids. Fill material for all three layers was obtained from Spreading Area "B" at the INEEL and placed over the landfills. The fill material was described as lean clay with sand. The general backfill and low-permeability soil layers were compacted to 95% of maximum dry density at 0 to +4 percentage points from optimum moisture content. In addition, a riprap layer was installed in Landfill II at its extreme northeast face, rather than re-vegetating the area, in an effort to prevent erosion due to the steepness of the slope. A detailed description of the remedial action, including the installation of the landfill covers, is provided in the *Remedial Action Report CFA Landfills I, II, and III Native Soil Cover Project Operable Unit 4-12* (DOE-ID 1997).

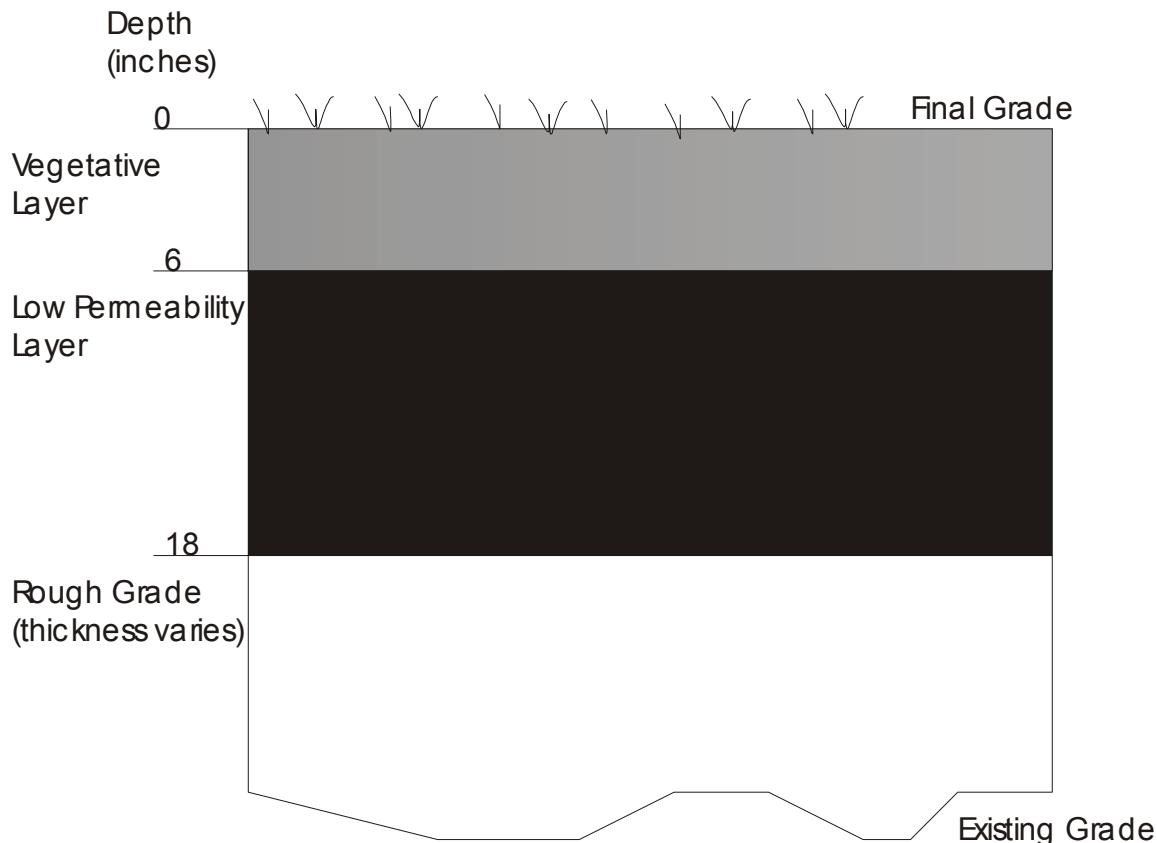


Figure 3. Schematic of CFA landfill covers.

1.4 Monitoring Activities

The groundwater, soil-gas, and soil-moisture monitoring activities are summarized as follows:

- Groundwater monitoring
 - A total of nine monitoring wells were sampled. Five monitoring wells in the vicinity of the landfills were sampled, and four monitoring wells south of CFA were sampled. Water levels in two wells were too low to be sampled.
 - In January 2004, water levels were measured in 30 wells to evaluate the direction of groundwater flow. The January 2004 measurements are used for this report, because water levels were not measured in 2003.
- Soil-gas monitoring
 - In October 2003, five soil-gas monitoring wells near the landfills were sampled for volatile organic compounds (VOCs). Samples were taken from four depths in the vadose zone at each well. The depths were near the soil/basalt interface (~10 ft), in the basalt above the first interbed (~35 ft), in the basalt below the first interbed (~70 ft), and approximately 30 ft below the third depth (~100 ft).

- Soil-moisture monitoring
 - Soil-moisture readings were obtained monthly from five neutron-probe access tubes (NATs) at intervals to a depth of approximately 20 ft. Three NATs are associated with CFA Landfill II, with one NAT located on the landfill, one on the edge of the landfill, and one adjacent to the landfill. At Landfill III, one NAT is located on the landfill, and one NAT is located on edge of the landfill. The soil-moisture monitoring data cover the period from October 2002 to October 2003. The bimonthly neutron probe sampling did not occur in the January through April period, because a distinct spring snowmelt did not occur as it does in most years. A snowpack did not build up on the landfill covers due to the unusually warm winter.
 - Time-domain reflectometry (TDR) moisture data were obtained from a total of four arrays at 1-hr intervals from the surface to a depth of 8 ft. Two arrays were located at CFA Landfill II, and the other two arrays were located at CFA Landfill III. The TDR monitoring data cover the period from October 2002 to October 2003.

2. GROUNDWATER MONITORING RESULTS

Groundwater in the vicinity of CFA is monitored to ensure contaminants from the landfills do not migrate to the SRPA in excess of drinking water standards. Groundwater samples were collected from nine wells in the vicinity of the CFA landfills. These samples were analyzed for VOCs, anions, metals, and alkalinity. Additionally, groundwater levels were measured in the vicinity of the CFA landfills.

2.1 Water-Level Measurements

Water levels were measured at 30 wells at and near CFA in January 2004 (Table 1). Water-level measurements could not be obtained from LF2-08 and LF3-10 because of problems with the water-level access pipes. In addition, a water-level measurement was not obtained from USGS-111 because of access problems. The depth to groundwater was ascertained using surveyed measuring point elevations and well deviation correction factors. A groundwater-level contour map was plotted for the January 2004 data (Figure 4). The apparent groundwater flow direction from CFA Landfills I and III varies from southeast to south to southwest and is the same direction as that stated in the previous monitoring report (INEEL 2003c). The apparent direction of groundwater flow from Landfill II is predominantly southeast. The groundwater-level contour map shows that areas of Landfills I and II are not covered by the current groundwater monitoring system. The current groundwater contour map is consistent with the groundwater contour maps in the previous annual report (INEEL 2003c) and the five-year review (DOE-ID 2002a). Additional wells are planned to address this problem as recommended in the previous monitoring report (INEEL 2003c).

In comparison to water levels measured in October 2002 (INEEL 2003c), the most significant difference is that water levels have dropped by approximately 5 ft. This drop is the reason that wells LF2-09 and LF2-11 could not be sampled. Although the water level has fallen sharply, the gradients and flow directions are nearly the same as those ascertained from water-level data collected in October 2002.

The groundwater gradient in the area covered by the water-level measurements varies considerably (see Figure 4). The gradient is slight over the area between the Idaho Nuclear Technology and Engineering Center (INTEC) and the CFA landfills (more than 1 mile), with less than 2 ft of head difference. Steeper gradients are present south of CFA and to the east of CFA between the Security Training Facility (STF) and the Power Burst Facility. From LF2-09 to CFA-MON-A-003, the average gradient is approximately 5.3 ft per mile; from LF3-09 to M12S, the average gradient is about 5.5 ft per mile.

Table 1. Water-level measurement data for January 2004.

Well	Date	Time	Depth to Water (ft)	Well Stick-up (ft)	Ground Elevation (ft)	Deviation Correction (ft)	Groundwater Elevation (ft)	Barometric Pressure
CFA-MON-001	1/19/04	1250	496.01	2.7	4,936.44	0.04	4,443.17	25.28
CFA-MON-002	1/19/04	1259	492.38	2.54	4,932.24	0.05	4,442.45	25.28
CFA-MON-003	1/19/04	1309	491.72	2.28	4,930.31	0.03	4,440.90	25.28
ICPP-164B	1/19/04	1014	502.55	3.05	4,948.66		4,449.16	25.31
ICPP-164C	1/19/04	950	506.4	3.11	4,951.89		4,448.60	25.28
ICPP-166	1/19/04	851	510.35	2.76	4,956.0		4,448.41	25.28
ICPP-167	1/19/04	930	501.13	3.11	4,946.71		4,448.69	25.28
LF2-08 ^a	1/19/04	1359		1.75	4,931.72			25.28
LF2-09	1/19/04	1409	490.52	1.45	4,932.23	5.43	4,448.59	25.28
LF2-10	1/19/04	1619	488.45	1.7	4,932.48		4,445.73	25.28
LF2-11	1/19/04	1340	481.74	1.8	4,928.36		4,448.42	25.28
LF3-08	1/19/04	1135	498.07	1.51	4,940.22	5.04	4,448.70	25.31
LF3-09	1/19/04	1148	495.64	3.04	4,941.08		4,448.48	25.31
LF3-10 ^a	1/19/04	1105		2.75	4,942.62	0.06		25.28
M12S	1/20/04	1021	541.7	2.21	4,975.23	0.07	4,435.81	25.22
STF-MON-A-004	1/20/04	1104	514.18	2.79	4,945.37		4,433.98	25.31
USGS-020	1/20/04	1321	470.05	0.73	4,916.36	0.07	4,447.11	25.31
USGS-034	1/20/04	1149	481.64	1.08	4,929.19		4,448.63	25.31
USGS-035	1/20/04	1250	482.72	1.56	4,929.64		4,448.48	25.31
USGS-036	1/20/04	1141	481.72	1.11	4,929.2		4,448.59	25.31
USGS-037	1/20/04	1133	481.9	1.27	4,929.38		4,448.75	25.31

Table 1. (continued).

Well	Date	Time	Depth to Water (ft)	Well Stick-up (ft)	Ground Elevation (ft)	Deviation Correction (ft)	Groundwater Elevation (ft)	Barometric Pressure
USGS-038	1/20/04	1121	482.29	1.31	4,929.63		4,448.65	25.31
USGS-077	1/19/04	1515	475.43	2.14	4,921.79		4,448.50	25.28
USGS-083	1/20/04	1000	506.4	2.15	4,941.59		4,437.34	25.31
USGS-085	1/19/04	1121	493.16	2.25	4,939.26		4,448.35	25.25
USGS-112	1/19/04	1455	484.02	2.31	4,927.84	2.73	4,448.86	25.25
USGS-113	1/19/04	1504	484.89	2.35	4,925.28	5.75	4,448.49	25.28
USGS-114	1/19/04	1522	478.45	2.22	4,920.09	4.71	4,448.57	25.28
USGS-115	1/19/04	1531	474.54	2.23	4,918.84	1.99	4,448.52	25.28
USGS-116	1/19/04	1544	469.33	2.56	4,916.03		4,449.26	25.25
USGS-127	1/20/04	941	515.02	1.9	4,956.44		4,443.32	25.28
USGS-128	1/20/04	1036	487.55	1.25	4,934.92		4,448.62	25.28

a. The water level was not measured due to a problem with the water-level access pipe.

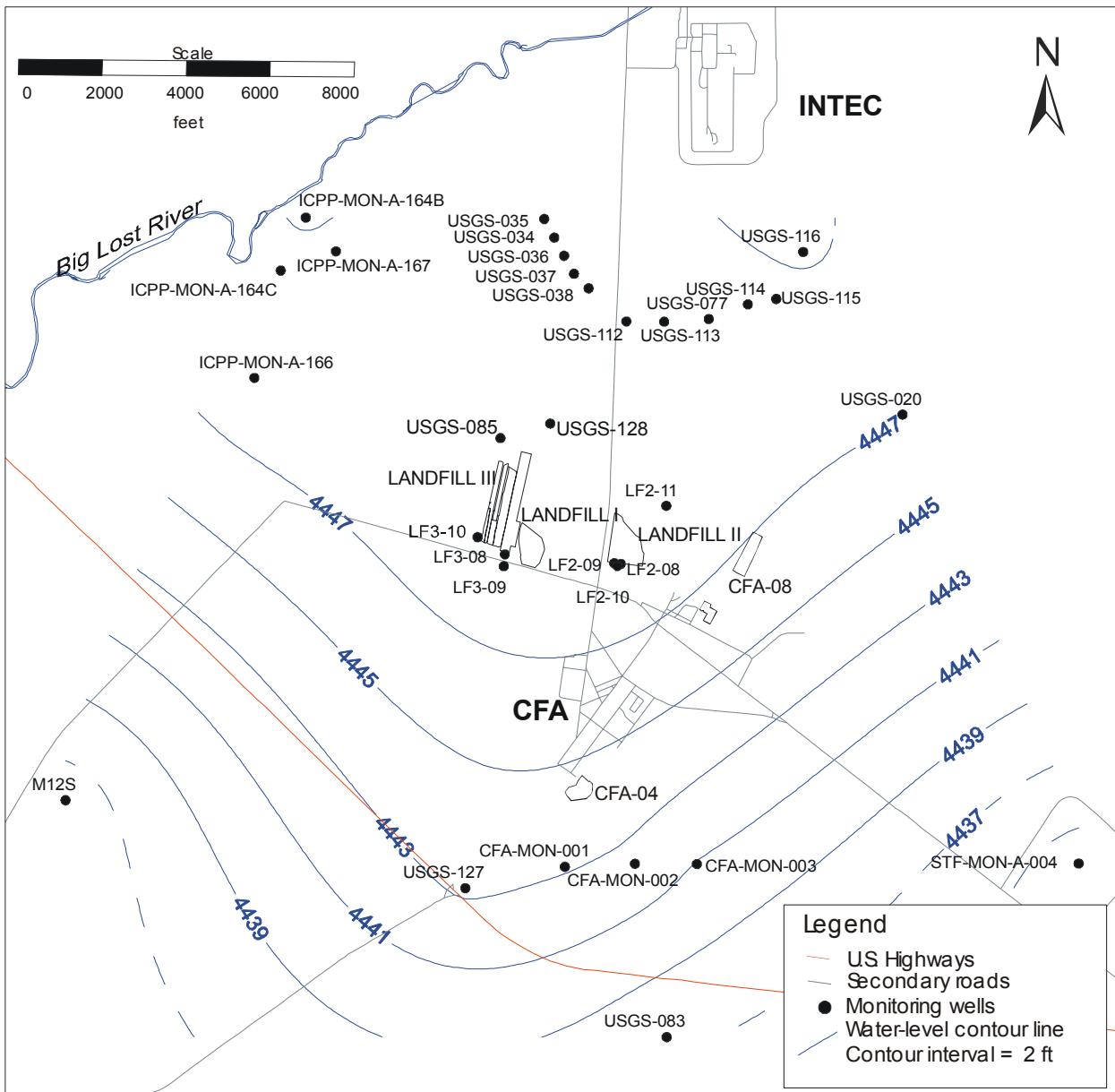


Figure 4. Groundwater-level contour map for January 2004.

2.2 Groundwater Analytical Data

Groundwater samples were collected and analyzed for VOCs, anions, metals, and alkalinity. The groundwater monitoring results are summarized for detected analytes at CFA Landfill III (Table 2), at CFA Landfill II (Table 3), and downgradient of CFA (Table 4). A complete listing of the groundwater results for samples collected in 2003 is provided on a compact disc in Appendix A.

Table 2. Summary of detected groundwater analytes for November and December 2003 sampling at CFA Landfill III.^a

Compound	Units	USGS-128	L	V	LF3-08	L	V	LF3-09	L	V	LF3-10	L	V	Duplicate	L	V
Inorganics																
Aluminum	µg/L	—			84.3	B	—	—	—	—	—	—	—	—	—	—
Barium	µg/L	82.5	B		117	B	118	B	108	B	107	B	107	B	107	B
Calcium	µg/L	48,700			55,000		62,300		53,900		53,600					
Chromium	µg/L	19.2			10		31.5		10.6		10	B	10	B	10	B
Cobalt	µg/L	—			—		2.3	B	1.2	B	—		—		—	
Copper	µg/L	7.8	B		—		—		—		—		—		—	
Iron	µg/L	1,950			284		202		—		—		—		—	
Magnesium	µg/L	13,100			15,700		18,600		14,200		14,200					
Manganese	µg/L	20.1			3.7	B	19.4		3.5	B	3.3	B	3.3	B	3.3	B
Nickel	µg/L	3.3	B		—		112		22.7	B	24	B	24	B	24	B
Potassium	µg/L	2,730	B		4,350	B	4,700	B	3,650	B	3,630	B	3,630	B	3,630	B
Sodium	µg/L	16,500			41,800		41,100		34,300		33,600					
Vanadium	µg/L	—			—		—		3.3	B	3.4	B	3.4	B	3.4	B
Zinc	µg/L	958	E	J	32	E	J	83	E	J	43.4		46.5			
Anions																
Alkalinity	mg/L	317			140		271		137		133					
Chloride	mg/L	23.6		J	88.8		117		58.8		58		J	58		J
Fluoride	mg/L	0.214	J		0.224	J	0.175	J	0.21	J	0.193	J	0.193	J	0.193	J
Nitrate/nitrite as N	mg/L	1.17			2.1		2.15		2.6		2.17					
Sulfate	mg/L	36.2		J	31		31.2		29.2		29.1		J	29.1		J
Organics																
Toluene	µg/L	—			0.82	J	J	—	1.2	J	1.4	J	1.4	J	1.4	J

a. Data qualifier flags are defined in Appendix A. "L" indicates a laboratory flag, and "V" indicates a validation flag.

Table 3. Summary of detected groundwater analytes for November 2003 sampling at CFA Landfill II.^{a,b}

Analyte	LF2-08 11/04/2003			LF2-09 11/04/2003			LF2-11 11/04/2003		
	L	V	NS	L	V	NS	L	V	NS
Inorganics									
Barium	µg/L	131	B			NS			NS
Calcium	µg/L	55,400				NS			NS
Chromium	µg/L	9.1	B			NS			NS
Iron	µg/L	277				NS			NS

Table 3. (continued).

Analyte		LF2-08 11/04/2003		L	V	LF2-09 11/04/2003		LF2-11 11/04/2003	
		µg/L				µg/L		µg/L	
Magnesium			15,600				NS		NS
Manganese		µg/L	3.1	B			NS		NS
Potassium		µg/L	5,050				NS		NS
Sodium		µg/L	43,900				NS		NS
Zinc		µg/L	13.8	BE	J		NS		NS
Anions									
Alkalinity		mg/L	130				NS		NS
Chloride		mg/L	106		J		NS		NS
Fluoride		mg/L	0.211	J			NS		NS
Nitrate/nitrite		mg/L	3.5				NS		NS
Sulfate		mg/L	31.3		J		NS		NS
Organics									
Toluene		µg/L	15				NS		NS

a. Data qualifier flags are defined in Appendix A. "L" indicates a laboratory flag, and "V" indicates a validation flag.

b. "NS" indicates that the well was not sampled due to low water in the well.

Table 4. Summary of detected groundwater analytes for 2002 sampling of wells downgradient of CFA.^a

Compound	Units	CFA-MON-001			CFA-MON-002			CFA-MON-003			USGS-083		
		11/04/2003	L	V	11/04/2003	L	V	11/04/2003	L	V	11/05/2003	L	V
Inorganics													
Aluminum	µg/L	149	B		416			109	B		—		
Barium	µg/L	25.4	B		51.6	B		42.3	B		28.3	B	
Calcium	µg/L	30,900			54,600			43,600			26,800		
Chromium	µg/L	13.1			42.4			13			13.8		
Cobalt	µg/L	—			1.1	B		—			—		
Copper	µg/L	—			14.9	B		2.6	B		—		
Iron	µg/L	215			1670			229					
Magnesium	µg/L	12,700			23,100			20,400			10,900		
Manganese	µg/L	6.9	B		34.1			4.7	B		—		
Nickel	µg/L	4.2	B		36.7	B		—			—		
Potassium	µg/L	2,770	B		4,100	B		3,450	B		2660	B	
Sodium	µg/L	9,270			15,300			11,700			10,100		
Zinc	µg/L	39	E	J	268	E	J	60.1	E	J	151	E	J
Anions													
Alkalinity	mg/L	107			110			104			200		

Table 4. (continued).

Compound	Units	CFA-MON-001			CFA-MON-002			CFA-MON-003			USGS-083		
		11/04/2003	L	V	11/04/2003	L	V	11/04/2003	L	V	11/05/2003	L	V
Chloride	mg/L	23.2	J		54.2	J		44.4	J		12	J	
Fluoride	mg/L	0.229	J		0.201	J		0.199	J		0.235	J	
Nitrate/nitrite	mg/L	1.38			21.3			11.1			0.74		
Sulfate	mg/L	20.7	J		29.8	J		25.1	J		21.7	J	
Organics													
Toluene	µg/L	—			—			J	J		—		

a. Data qualifier flags are defined in Appendix A. "L" indicates a laboratory flag "V" indicates a validation flag

Groundwater samples were collected from nine wells in the vicinity of the CFA landfills (see Figure 4). Groundwater samples were collected from wells downgradient of the former and current sewage treatment facilities (i.e., CFA-MON-A-001, CFA-MON-A-002, CFA-MON-A-003, and USGS-083), one well downgradient from CFA Landfill II (i.e., LF2-08), wells located downgradient of CFA Landfills I and III (i.e., LF3-08, LF3-09, and LF3-10), and a well located upgradient of CFA Landfills I and III (i.e., USGS-128). Wells LF2-09 and LF2-11 could not be sampled because of the decline in water levels.

The data for field-measured parameters—including temperature, pH, specific conductance, and dissolved oxygen—are summarized along with well construction data in Table 5. The pH data indicated that samples were neutral to slightly alkaline. The dissolved oxygen data indicated that the samples were close to dissolved oxygen saturation. Specific conductance measurements varied widely from 0.276 to 0.848 mS/cm, with the wells affected by the INTEC plume having much higher specific conductance measurements.

Table 5. Summary of physical parameters and well construction details for November and December 2003 sampling.

Well Name	Open/Screen Interval (ft bls)	Pump Depth (ft bls)	Date Sampled	Temperature (°C)	pH	Specific Conductivity (mhos/cm)	Dissolved Oxygen (mg/L)
LF2-08	485 to 495	484	11/04/03	13.15	8.36	0.655	8.18
LF2-09	469 to 497	486	07/02/03	N	N	N	N
LF2-11	466 to 499	485	11/04/03	N	N	N	N
LF3-08	500 to 510	504	11/04/03	12.34	7.76	0.626	7.75
LF3-09	480 to 500	493	11/03/03	12.07	7.39	0.726	9.37
LF3-10	481 to 501	494	12/18/03	12.22	7.5	0.547	8.12
CFA-MON-A-001	488 to 518	514	11/04/03	11.22	7.69	0.333	7.88
CFA-MON-A-002	488 to 518	516	11/04/03	11.34	7.1	0.594	7.22
CFA-MON-A-003	491 to 511	508	11/04/03	11.19	7.63	0.474	8.38
USGS-083	OH 516 to 752	606	11/05/03	11.56	7.95	0.276	9.25
USGS-128	OH 451 to 610	523	11/05/03	12.23	7.85	0.446	8.64

bls = below land surface.

N = not determined.

OH = open hole.

2.2.1 Groundwater Analytical Results

A comparison of the maximum concentrations for detected analytes versus background and the defined regulatory level is provided in Table 6. Nitrate was the only analyte detected above a maximum contaminant level (MCL), and iron and aluminum were above secondary MCLs (SMCLs). Nitrate concentrations greater than the 10-mg/L MCL for sensitive populations were present in CFA-MON-A-002 (21.3 mg/L) and CFA-MON-A-003 (11.1 mg/L). As defined, sensitive populations include infants. All other wells had nitrate concentrations at less than 4 mg/L. The nitrate concentrations in CFA-MON-A-002 and -003 have remained relatively steady over time (Figures 5 and 6). The source of the nitrate in the groundwater is discussed in further detail in Subsection 2.2.2.

Iron concentrations exceeded the SMCL of 300 µg/L in two wells. The solubility of iron is controlled by pH and dissolved oxygen concentration. Iron is soluble in low pH conditions or in the absence of dissolved oxygen. The elevated iron concentrations in USGS-128 and CFA-MON-A-002 are inconsistent with the high dissolved oxygen concentrations and neutral to slightly alkaline pH of these same wells (Table 5). The chemical inconsistency suggests that the iron is from suspended solids or well materials rather than being in solution. The trend of iron concentrations for CFA-MON-A-001 is shown in Figure 7 and demonstrates that the iron concentrations decreased after the galvanized riser pipe was replaced. The samples for iron and the other metals were not filtered.

Aluminum was above its SMCL in CFA-MON-A-002, which is located downgradient of CFA. The elevated aluminum concentration is probably due to suspended solids, because aluminum solubility is very low at the pH (7.1) found in the well. The principal control of dissolved aluminum concentrations is pH.

The wells in the vicinity of the CFA landfills have elevated levels of sodium and chloride relative to background concentrations. The elevated sodium and chloride concentrations in the CFA landfill wells are due to upgradient impacts from INTEC (DOE-ID 2002b; DOE-ID 2003). Sodium and chloride concentrations have remained relatively steady in the landfill wells since the wells were first sampled.

Zinc and iron concentrations are anomalously high in USGS-128 for the second straight year. This well is located upgradient of CFA Landfills I and III. Historically, high zinc, lead, and iron concentrations in the groundwater samples collected from several wells as part of the CFA groundwater monitoring and sampling program were the result of rusting carbon-steel casing and galvanized riser pipe used in the older groundwater-monitoring wells. This is a common problem identified in wells throughout the INEEL that do not have stainless-steel casing and riser pipes. Figure 5 depicts lead and zinc concentrations for well CFA-MON-A-003, demonstrating the relationship of lead and zinc concentrations in groundwater as a result of galvanic corrosion. After the galvanized riser pipe was replaced with stainless-steel riser pipe in CFA-MON-A-003 in August 2001, the lead concentration decreased below the action level (see Figure 5). The zinc and iron concentrations in USGS-128 appear to be indicative of well construction and not an indicator of a groundwater problem.

2.2.2 Nitrogen Isotope Data for Groundwater Samples

The CFA-08 drainfield was implicated as the source of the nitrate contamination based on the 2000 nitrogen isotope study and the assumption that groundwater flow was to the southwest (INEEL 2002). The nitrogen isotope study showed that the CFA-MON wells and CFA-1 (USGS 1999) had higher $\delta^{15}\text{N}$ values than the CFA landfill wells. Because the $\delta^{15}\text{N}$ values for the CFA-MON wells were higher than background and close to levels found downgradient of sewage treatment plants, the

CFA-08 drainfield seemed the likely source of the nitrate, even though the recorded total nitrogen contents of discharge to the drainfield from 1988 to 1995 were too low to cause the nitrate concentrations

Table 6. Background and regulatory levels for detected analytes.

Compound	Units	Maximum Detected Value	Location of Maximum Detected Value	MCL or SMCL ^a	LF2-11 Upgrade ^b Well ^b	Background ^c	Detections Above Background and Upgradient Well	Number of Wells With Detections Above MCL or SMCL
Anions								
Alkalinity-bicarbonate	mg/L	317	USGS-128	None	136	169–174	No	NA
Chloride	mg/L	117	LF3-09	250	107	16–27	Yes	0
Fluoride	mg/L	0.235	USGS-083	2	0.15	0.3–0.5	No	0
Nitrate/nitrite	mg-N/L	21.3	CFA-MON-A-002	10	3.3	1 to 2	Yes	2
Sulfate	mg/L	36.2	USGS-128	250	29.6	24–31	Yes	0
Common Cations								
Calcium	µg/L	62,300	LF3-09	None	60,400	43,000–46,000	Yes	NA
Magnesium	µg/L	25,400	CFA-MON-A-002	None	17,000	15,000	Yes	NA
Potassium	µg/L	5,040	LF2-09	None	4,360	3,100–3,500	Yes	NA
Sodium	µg/L	41,100	LF3-09	None	44,900	14,000–17,000	No	NA
Organic Analytes								
Toluene	µg/L	32	LF2-08	1,000	ND	NA	0	0
Inorganic Analytes								
Aluminum	µg/L	416	CFA-MON-A-002	50–200	240	10–13	Yes	1
Arsenic	µg/L	ND	—	50/10 ^d	ND	2 to 3	N	0
Barium	µg/L	131	LF2-08	2,000	160	50 to 70	Yes	0
Beryllium	µg/L	ND	—	4	ND	N	0	0
Cadmium	µg/L	ND	—	5	ND	<1	N	0
Chromium	µg/L	42.4	CFA-MON-A-002	100	23.3	2 to 3	Yes	0
Copper	µg/L	ND	—	1,300/1,000	ND	<1	N	0
Iron	µg/L	1,680	USGS-128	300	872	16–25	Yes	2
Lead	µg/L	ND	—	15 ^e	ND	1 to 5	N	0
Manganese	µg/L	20.1	USGS-128	50	8.1	7	Yes	0

Table 6. (continued).

Compound	Units	Maximum Detected Value	Location of Maximum Detected Value	MCL or SMCL ^a	LF2-11 Upgradient Well ^b	Background ^c	Detections Above Background and Upgradient Well	Number of Wells With Detections Above MCL or SMCL
Mercury	µg/L	ND	—	2	ND	N	N	0
Nickel	µg/L	112	LF3-09	None	11.7	N	Yes	NA
Selenium	µg/L	ND	—	50	ND	<1	N	0
Vanadium	µg/L	3.4	LF3-10	None	ND	N	N	NA
Zinc	µg/L	958	USGS-128	<i>5,000</i>	ND	<i>10.5–54</i>	Yes	0

a. Numbers in italics are for the SMCL.

b. Data for LF2-11 are from 2002, because the well could not be sampled in 2003.

c. Background is from two sources. Plain numbers are from Knobel, Orr, and Cecil (1992). Italicized numbers are from USGS (1999)—median and mean values.

d. The proposed new MCL for arsenic is 10 µg/L.

e. The action level for lead is 15 µg/L.

N = not determined.

NA = not applicable.

ND = not detected.

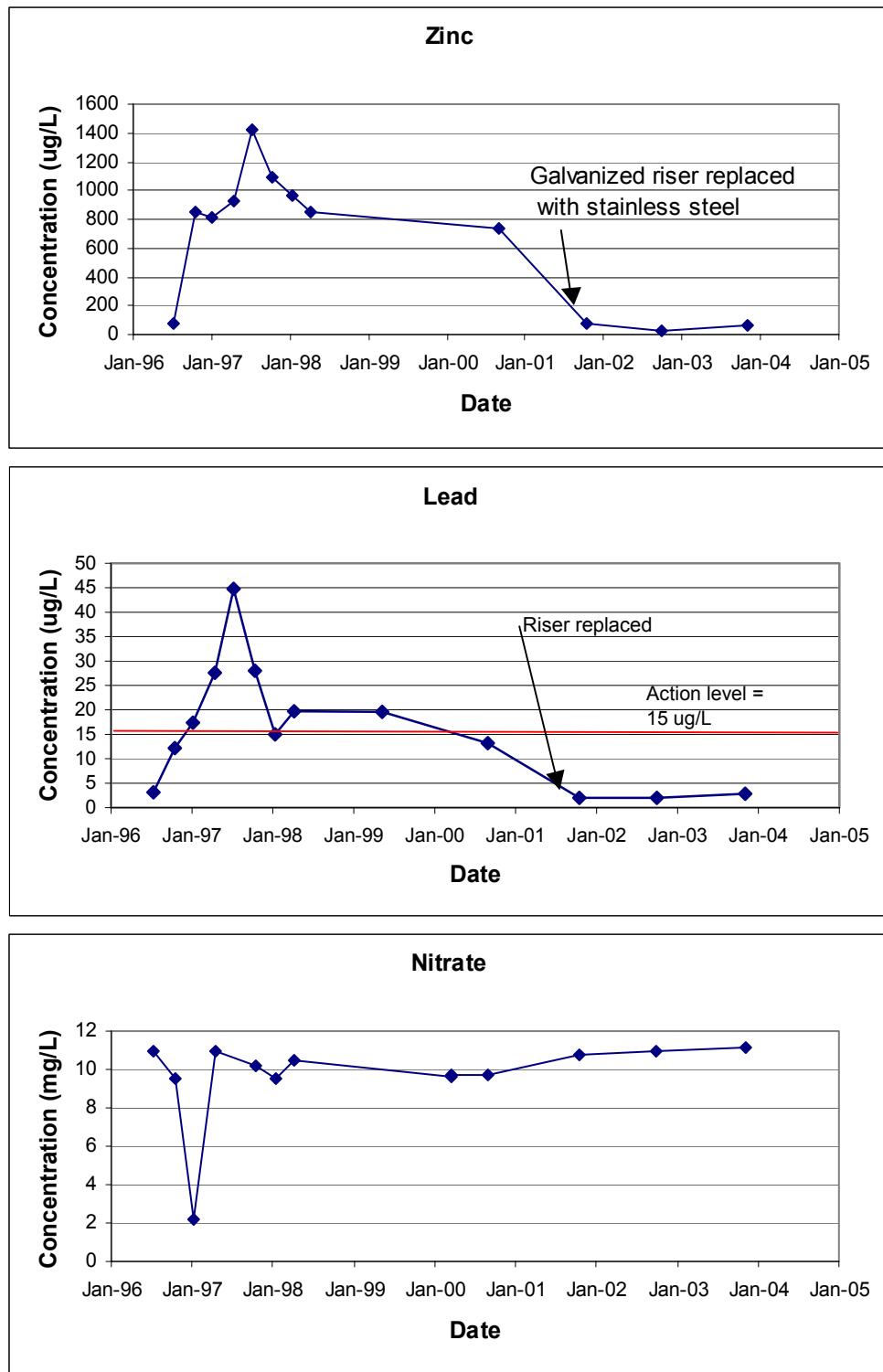


Figure 5. Trend for zinc, lead, and nitrate in groundwater from CFA-MON-A-003.

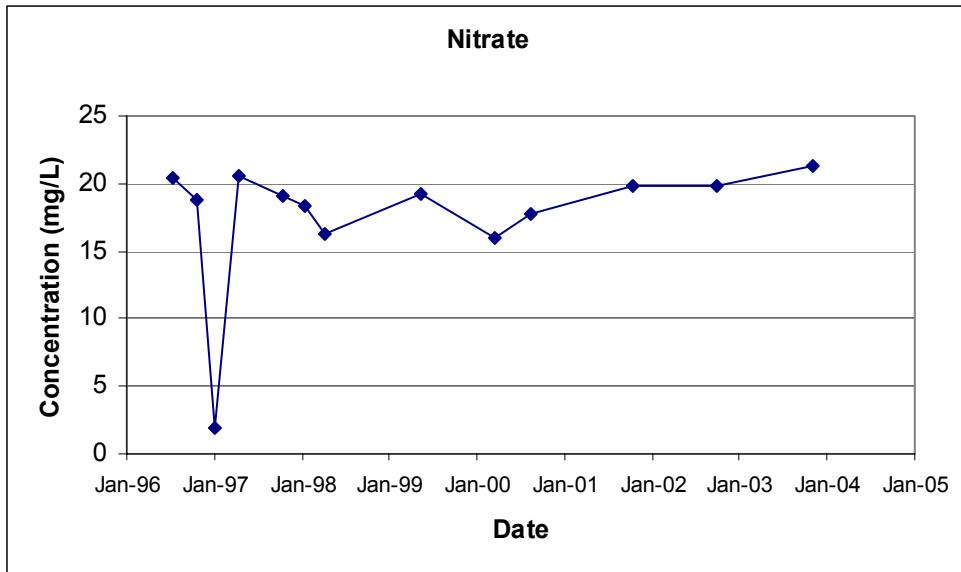


Figure 6. Trend for nitrate in groundwater from CFA-MON-A-002.

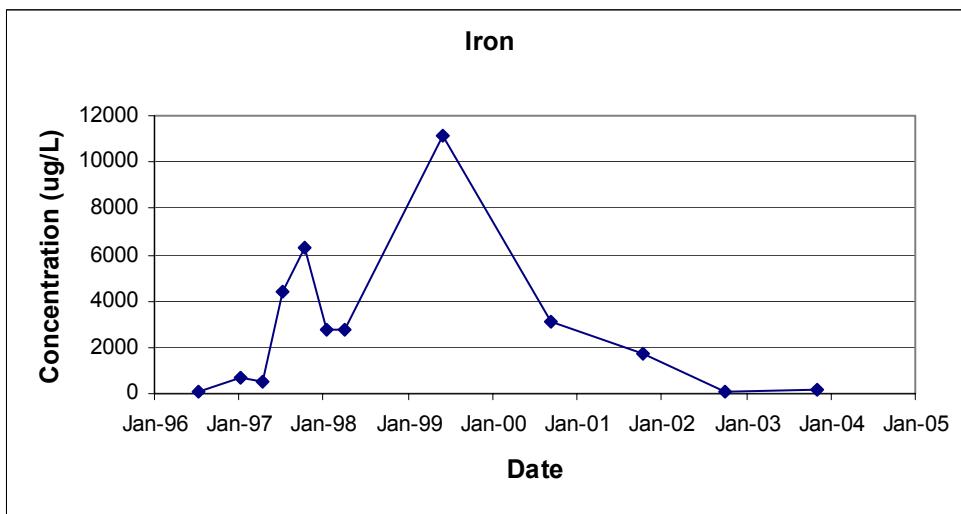


Figure 7. Trend for iron in groundwater from CFA-MON-A-001.

in CFA-MON-A-002. The CFA-04 dry pond was ruled out as a source of the nitrate, because the $\delta^{15}\text{N}$ of commercially produced nitrate should be 0 ± 4 per mil and the nitrogen used in commercial processes is drawn from the atmosphere. The $\delta^{15}\text{N}$ values for sewage typically range from 9 to 21 per mil (Clark and Fritz 1997).

The nitrogen-oxygen isotope analysis was redone, because the groundwater flow map in the 2002 annual monitoring report (INEEL 2003c) did not support CFA-08 as the source of the nitrate and the oxygen isotope ratio in nitrate was not determined in the previous study. The values for $\delta^{15}\text{N}$ and $\delta^{18}\text{O}$ of nitrate are shown in Table 7. Because the nitrogen isotope ratios for the CFA-MON wells are similar to the previously determined values, the $\delta^{18}\text{O}$ of nitrate must be used to differentiate the source of the nitrate. The $\delta^{18}\text{O}$ of nitrate can be used in combination with $\delta^{15}\text{N}$ data to determine the source of the nitrate. Nitrate used in acids would derive oxygen from the atmosphere with a $\delta^{18}\text{O}$ of 23.8 per mil and the local

water (Amberger and Schmidt 1987). The $\delta^{18}\text{O}$ of nitric acid has been determined to be 21 to 26 per mil and is similar to the value for atmospheric $\delta^{18}\text{O}$ of 23.8 (Bohlke et al. 2003). The nitrate formed from the oxidation of reduced nitrogen species in sewage derives two of its oxygen atoms from the local water and one from air (Clark and Fritz 1997). The $\delta^{18}\text{O}$ of nitrate derived from the nitrification of sewage can be expressed by the following equation:

$$\delta^{18}\text{O}_{\text{nitrato}} = 2/3 (\delta^{18}\text{O}_{\text{water}} + \varepsilon_{\text{water}}) + 1/3(\delta^{18}\text{O}_{\text{O}_2} + \varepsilon_{\text{O}_2}). \quad (1)$$

Table 7. Summary of nitrogen and oxygen isotope data for nitrate collected for CFA nitrate source identification.

Well	Sample Date	$\delta^{15}\text{N}$	$\delta^{18}\text{O}$
CFA-1	11/4/03	6.02	2.36
CFA-2	11/4/03	5.46	2
CFA-MON-001	11/4/03	7.69	1.27
LF2-08	11/4/03	5.5	3.88
CFA-MON-002	11/4/03	8.84	7.67
CFA-MON-003	11/4/03	8.77	6.78
LF3-08	11/4/03	5.39	4.08

The local precipitation and water from the SRPA in the vicinity of CFA have $\delta^{18}\text{O}$ values of -17 to -18 per mil (USGS 1999; DOE-ID 2002b). However, recent sampling from the INTEC sewage treatment lagoons shows a range of $\delta^{18}\text{O}$ values from -11 to -17 per mil. Nitrate derived from nitrification of sewage should have $\delta^{18}\text{O}$ values between -4 and 0.6 per mil, based on $\delta^{18}\text{O}$ values of -11 to -17 for water, the above equation, and the assumption that isotope fractionation during water ($\varepsilon_{\text{water}}$) and O_2 (ε_{O_2}) incorporation is negligible. Two wells, MW-24 and 37-4 (Figure 8), located near the sewage treatment lagoons at INTEC fit this equation very well.

The CFA-MON wells do not plot within the area that would indicate nitrification and/or denitrification of sewage (Figure 8). The range for nitrification of sewage is shown as 9 to 30 per mil on Figure 8 and was expanded from the typical range of 9 to 21 per mil based on a sample from a perched well near the INTEC sewage facility. Two perched water wells near the INTEC sewage treatment facility are plotted on Figure 8 and are within the area for nitrification of sewage. These wells are shown because samples from the former CFA sewage treatment facility are unavailable. In addition, the CFA-MON wells plot outside of the area that is indicated by denitrification of sewage nitrate based on the denitrification trend determined by Bottcher et al. (1995). The process of denitrification tends to increase the $\delta^{15}\text{N}$ and the $\delta^{18}\text{O}$ of nitrate at a rate of 2:1. The $\delta^{15}\text{N}$ values are similar to those ascertained previously (INEEL 2002), but the $\delta^{18}\text{O}$ values for nitrate in CFA-MON wells are inconsistent with a sewage source.

Because a sewage source seems unlikely, a natural source of nitrate is an alternative. Although the $\delta^{15}\text{N}$ value for the SRPA (background) is similar to the values in the CFA-MON wells, a natural source of the nitrate is unlikely, because the background (natural) $\delta^{18}\text{O}$ is -6 per mil compared to $\delta^{18}\text{O}$ values of 8 for the CFA-MON wells. The background or natural values for $\delta^{15}\text{N}$ and $\delta^{18}\text{O}$ were determined based on a sample from the INTEC production well. The production well has nitrate concentrations that are similar to USGS-121 upgradient of INTEC and does not appear to be affected by nitrate contamination from INTEC.

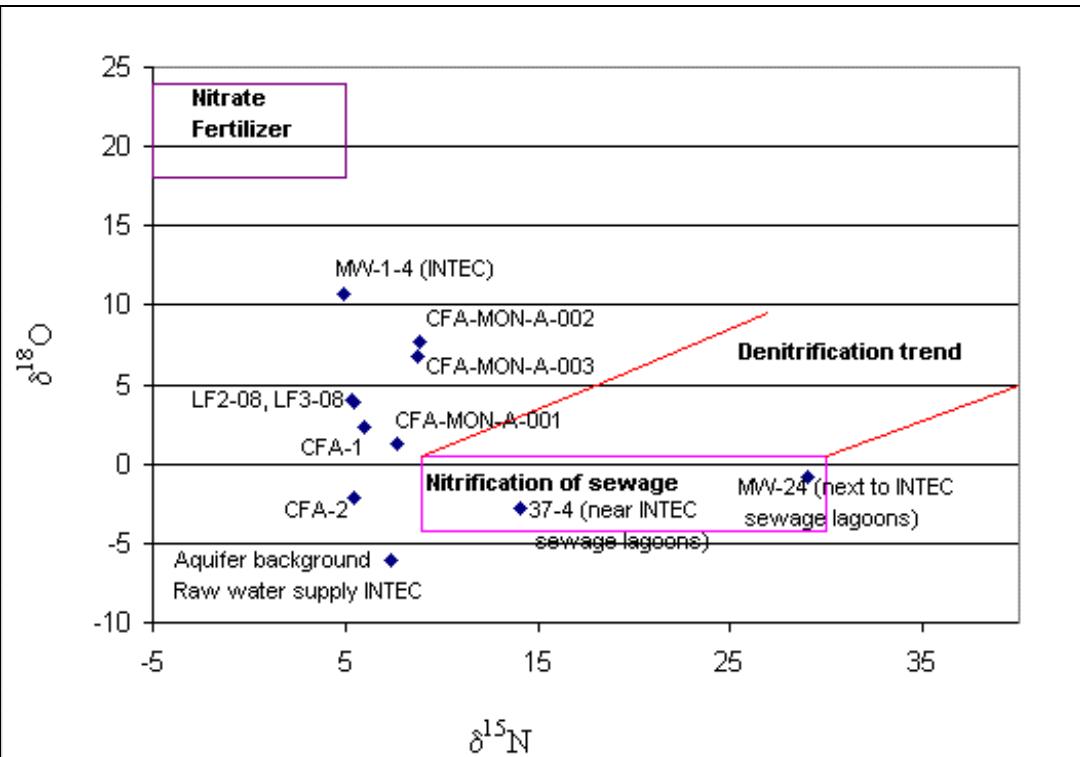


Figure 8. Diagram of $\delta^{15}\text{N}$ versus $\delta^{18}\text{O}$ for nitrate.

The CFA-MON wells have $\delta^{18}\text{O}$ and $\delta^{15}\text{N}$ values similar to two perched wells at INTEC, USGS-50 and MW-1-4. These two deep perched water wells do not appear to be affected by the INTEC sewage lagoons. The CFA-MON wells have slightly higher $\delta^{15}\text{N}$ values than would be expected from a manufactured source of nitrogen ($\delta^{15}\text{N}$ value of 0 ± 4 per mil). This could indicate multiple sources of nitrate or that a minor amount of denitrification has taken place in the CFA-MON wells, but the major source of nitrate in these wells is consistent with nitrate from a manmade source. Because the CFA-MON wells do not plot within the trend for denitrification of sewage, a manufactured source of the nitrate is favored.

Although the CFA-MON samples have $\delta^{18}\text{O}$ values much lower than that of nitric acid, 21 to 26 per mil, the $\delta^{18}\text{O}$ of nitrate from a nitric acid spill/disposal could reflect equilibration with local water if the mole fraction of HNO_3 in the original solution is greater than 0.4 (Bohlke et al. 2003). The $\delta^{18}\text{O}$ of nitrate from a nitric acid would be based on the concentration in the original solution and the fractionation factor for nitrate-water. A fractionation factor for $\delta^{18}\text{O}$ of 1.0215 was determined for equilibration of acid with water at 22°C (Bohlke et al. 2003). If this factor is applied to local water with $\delta^{18}\text{O}$ values of -11 to -18 per mil, then $\delta^{18}\text{O}$ values of 3 to 10 per mil are calculated for nitrate equilibrated with local water. The calculated range for equilibrium of local water with nitric acid is close to the observed $\delta^{18}\text{O}$ values for the CFA-MON wells and deep INTEC perched water. A good deal of uncertainty is associated with the calculation of the $\delta^{18}\text{O}$ values for nitrate from nitric acid, because the nitrate concentrations used in the laboratory and the method used to neutralize the solutions are unknown. Because of that uncertainty, $\delta^{18}\text{O}$ of nitrate from a nitric acid that has equilibrated or partially equilibrated with local water should fall within the range of 3 to 23 per mil. This $\delta^{18}\text{O}$ range is higher than the expected values for sewage nitrate that has not undergone denitrification; this range is also consistent with the $\delta^{18}\text{O}$ values from the CFA-MON wells.

3. SOIL-GAS MONITORING RESULTS

The locations of the five soil-gas boreholes are shown in Figure 9. Four gas-sampling ports at each location are designed to sample soil gases from discrete depths. One shallow sampling port was placed within the surficial sediments at a depth of approximately 13 ft. A second sampling port was placed in basalt at a depth of approximately 38 ft above the shallow interbed, which is located approximately 40 to 60 ft below land surface (bls). Two deep sampling ports were placed below the shallow interbed, with perforated sections vertically separated by approximately 30 ft. The depths of these two ports are approximately 78 and 108 ft. The actual sampling depths for the gas-sampling ports are given as a footnote in Table 8. The perforated sections of the deep sampling ports were located adjacent to fracture zones, because they are the most probable avenues of soil-gas migration. Soil-gas samples were collected for VOCs, including methane, on October 23, 2003. A summary of analytes detected in the soil-gas samples is provided in Table 8, and a complete listing of results is provided on a compact disc in Appendix A. The VOC that occurred at the highest concentration in the 2003 vapor sampling was 1,1,1-trichloroethane at 13,000 parts per billion by volume (ppbv) in GSP3-1 at a nominal depth of 77.5 ft.

Historically, VOCs that have been detected consistently in the soil-gas samples include 1,1,1-trichloroethane, 1,1-dichloroethane, 1,1-dichloroethene, dichlorodifluoromethane, trichlorofluoromethane, trichloroethene, F-113, F-114, cis-1,2-dichloroethene, carbon tetrachloride, and tetrachloroethene. These compounds are refrigerants, common solvents, products of solvent degradation, and constituents found in solvents that are used to clean mechanical equipment. Generally, the upper soil-gas locations at a depth of 10 to 13 ft bls were low in VOC concentrations, with the highest VOC concentrations at the intermediate sample-port depths of approximately 35 to 38 ft bls and 70 to 78 ft bls. The VOC concentrations then generally decreased in samples collected from the lowermost locations at 100 to 108 ft bls. Methane, which is a common by-product of anaerobic degradation of landfill wastes, was below detection limits of 0.76% in all samples collected in October 2003.

At GSP1-1, most analytes were within their historical average concentration range. The analytes occurring at the highest concentrations in GSP1-1 were 1,1,1-trichloroethane, 1,1-dichloroethene, trichloroethene, and trichlorofluoromethane. The concentration trends for these four compounds are shown in Figure 10. Trichlorofluoromethane, 1,1,1-trichloroethane, trichloroethene, and 1,1-dichloroethene show a trend toward increasing concentration at 37.5 and 107.5 ft.

Analytes were within historical ranges for GSP2-1 and were often less than they were in 2002. All detected compounds were below 1,000 ppbv in concentration. The VOC concentrations in GSP2-1 are generally lower than in the other gas-monitoring wells, and trends were not plotted for that reason.

At GSP2-2, analytes were within their historical ranges. The compounds occurring at the highest concentrations were 1,1,1-trichloroethane, 1,1-dichloroethane, dichlorodifluoromethane, trichlorofluoromethane, and cis-1,2-dichloroethene. The concentration trends for 1,1,1-trichloroethane, 1,1-dichloroethane, dichlorodifluoromethane, and trichlorofluoromethane are shown in Figure 11 to illustrate representative data trends. Trichlorofluoromethane and dichlorofluoromethane exhibited a trend of increasing concentrations at 37.5 ft. However, dichlorodifluoromethane concentrations decreased at all depths compared to 2002 results.

At GSP3-1, the compounds occurring at the highest concentrations were 1,1,1-trichloroethane, dichlorodifluoromethane, trichlorofluoromethane, and 1,1-dichloroethene. The concentration trends for 1,1,1-trichloroethane and 1,1-dichloroethene are shown in Figure 12 to illustrate representative data trends. Analytes detected at concentrations greater than 100 ppbv and exceeding their respective historical ranges were tetrachloroethene (37.5 ft), 1,1-dichloroethane (37.5 and 77.5 ft), dichlorodifluoromethane (77.5 ft), and trichlorofluoromethane (77.5 ft).

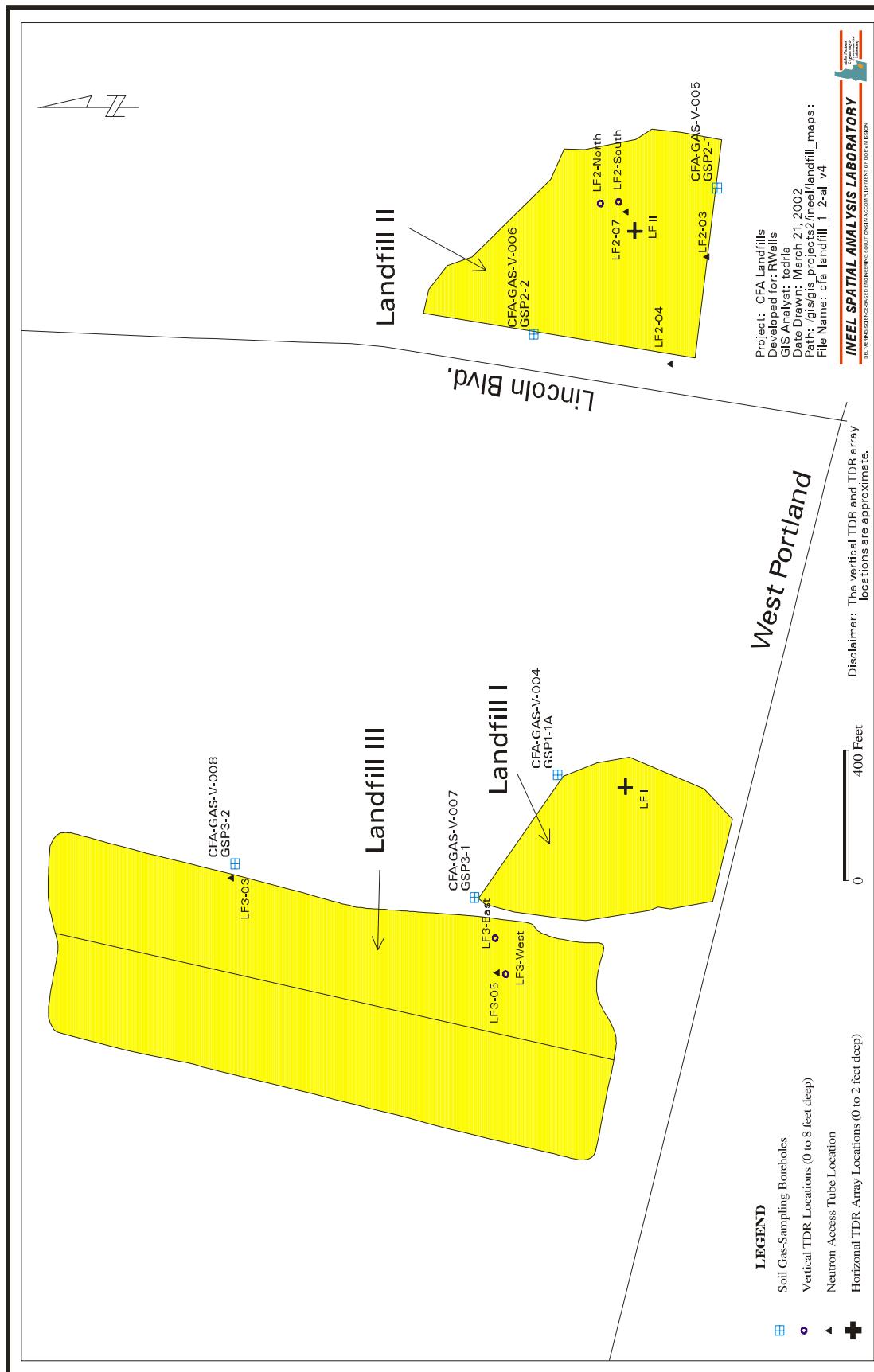


Figure 9. Locations of soil-gas boreholes, TDR arrays, and NATS.

Table 8. Summary of detected soil-gas analytes in ppbv for 2003.^a

Depth (ft)	Compound	GSP 1-1 ^b			GSP 2-1 ^c			GSP 2-2 ^d			GSP 3-1 ^e			GSP 3-2 ^f		
		LF	VF	LF	VF	LF	VF	LF	VF	LF	VF	LF	VF	LF	VF	
12.5	1,1,1-trichloroethane	1,100	E			14	J	J		1,100	D			1,400	D	260
37.5	1,1,1-trichloroethane	11,000	D			35				960	D			4,900	D	930
77.5	1,1,1-trichloroethane	3,800	D			170				800	D			13,000	D	2,700
107.5	1,1,1-trichloroethane	7,000	D			220				950	D			2,700	D	450
12.5	1,1-dichloroethane	120				ND				1,600	D			200		42
37.5	1,1-dichloroethane	270				ND				2,500	D			750		230
77.5	1,1-dichloroethane	23				57				970	D			290		360
107.5	1,1-dichloroethane	220				100				920	D			29		ND
12.5	1,1-dichloroethene	410				ND				120	DJ	J		500		ND
37.5	1,1-dichloroethene	4,600	D			ND				76				1,600	DJ	J
77.5	1,1-dichloroethene	2,000	D			ND				75				5,800	D	390
107.5	1,1-dichloroethene	3,200	D			10	J	J		100				1,200	D	130
12.5	Carbon tetrachloride	ND				ND				ND				ND		ND
37.5	Carbon tetrachloride	12	J	J		12	J	J		7	J	J		8	J	ND
77.5	Carbon tetrachloride	ND				52				27				14		ND
107.5	Carbon tetrachloride	10	J	J		62				39				ND		6
12.5	Chloroform	7	J	J		ND				ND				10	J	J
37.5	Chloroform	28				ND				25				39		10
77.5	Chloroform	7	J	J		23				15	J	J		36		J
107.5	Chloroform	23				36				17				ND		ND
12.5	cis-1,2-dichloroethene	10	J	J		ND				1,900	D			ND		18
37.5	cis-1,2-dichloroethene	8	J	J		ND				1,300	D			43		65
77.5	cis-1,2-dichloroethene	ND				ND				410				ND		140
107.5	cis-1,2-dichloroethene	7	J	J		ND				270				ND		ND
12.5	Dichlorodifluoromethane	440				200				410	D	U		410		180

Table 8. (continued).

Depth (ft)	Compound	GSP 1-1 ^b				GSP 2-1 ^c				GSP 2-2 ^d				GSP 3-1 ^e				GSP 3-2 ^f			
		LF	VF	LF	VF	LF	VF	LF	VF	LF	VF	LF	VF	LF	VF	LF	VF				
37.5	Dichlorodifluoromethane	770		310		1,100	E	J		1,900	D			750	D						
77.5	Dichlorodifluoromethane	320		730		1,100	D			980	DJ	J		1,600	D						
107.5	Dichlorodifluoromethane	350	JN	NJ		820	D		ND		370			720							
12.5	Ethane, 1,2-dichloro-1,1,2-trifluor	43	JN	NJ		ND		ND			58	JN	NJ	31	JN	NJ					
37.5	Ethane, 1,2-dichloro-1,1,2-trifluor	130	JN	NJ		ND			110	JN	NJ		170	JN	NJ	130	JN	NJ			
77.5	Ethane, 1,2-dichloro-1,1,2-trifluor					36	JN	NJ		100	JN	NJ		92	JN	NJ	140	JN	NJ		
107.5	Ethane, 1,2-dichloro-1,1,2-trifluor	55	JN	NJ		42	JN	NJ		ND			39	JN	NJ	ND					
12.5	1,1,2-trichlor-1,2,2-trifluoroethane (F-113)	230		21				67	DJ	J		240			170						
37.5	1,1,2-trichlor-1,2,2-trifluoroethane (F-113)	530		29				230			830			650							
77.5	1,1,2-trichlor-1,2,2-trifluoroethane (F-113)	210		93				260			680			1,200	D						
107.5	1,1,2-trichlor-1,2,2-trifluoroethane (F-113)	430		130				310			280			520							
12.5	Methane, dichlorofluoro-	99	JN	NJ		ND							140	JN	NJ	20	JN	NJ			
37.5	Methane, dichlorofluoro-	280	JN	NJ		ND			200	JN	NJ		510	JN	NJ	230	JN	NJ			
77.5	Methane, dichlorofluoro-	38	JN	NJ		41	JN	NJ		290	JN	NJ		ND		580	JN	NJ			
107.5	Methane, dichlorofluoro-	240	JN	NJ		50	JN	NJ		190	JN	NJ		82	JN	NJ	19	JN	NJ		
12.5	Phenol	19	JN	NJ		17	JN	NJ		ND			19	JN	NJ	ND					
37.5	Phenol	25	JN	NJ		28	JN	NJ		21	JN	NJ		18	JN	NJ	ND				
77.5	Phenol	ND								20	JN	NJ		21	JN	NJ	20	JN	NJ		
107.5	Phenol	27	JN	NJ		ND				25	JN	NJ		26	JN	NJ	ND				
12.5	Tetrachloroethylene	95		59				190	D				31			97					

Table 8. (continued).

Depth (ft)	Compound	GSP 1-1 ^b	GSP 1-2 ^c	GSP 2-1 ^c	GSP 2-2 ^d	GSP 3-1 ^e	GSP 3-2 ^f	
		Compound	LF	VF	LF	VF	LF	VF
37.5	Tetrachloroethene	66	92	600	430	430	220	
77.5	Tetrachloroethene	7	J	180	380	24	16	
107.5	Tetrachloroethene	58	210	390	12	J	J	
12.5	Trichloroethene	150	42	160	D	75	120	
37.5	Trichloroethene	1,700	D	33	360	440	200	
77.5	Trichloroethene	550	47	180	130	130		
107.5	Trichloroethene	1,200	D	76	210	37	11	
12.5	Trichlorofluoromethane	380	64	230	D	U	180	
37.5	Trichlorofluoromethane	1,200	DJ	ND	790	300	1,000	
77.5	Trichlorofluoromethane	420	ND	1,800	D	D	D	
107.5	Trichlorofluoromethane	820	D	ND	1,800	D	2,300	
					440	440	790	

a. Two columns are shown for data qualifiers. The first column, "LF," is the laboratory qualifier flag, and the second column, "VF," is the validation flag. See Appendix A for definitions of data qualifiers. Redundant data flags were applied in accordance with validation procedures.

b. Depths shown are proposed depths from the work plan (DOE-ID 1996). Actual sample depths are 8–511.5 ft, 43–46 ft, 64–67 ft, and 95–98 ft. Additional compounds detected and their concentrations in ppbv are propane at 490N at 12.5 ft, pentane at 901N at 37.5 ft and 71JN at 107.5 ft; butane at 180JN at 37.5 ft and 1301N at 107.5 ft; 2-methyl-1-propanol at 1201N at 12.5 ft, 2-methyl-butane at 41JN at 107.5 ft; 1-chloro-1,1-difluoro-ethane at 99JN at 37.5 ft, 33 JN at 77.5 ft, and 71JN at 107.5 ft; 2-methyl-pentane at 291N at 37.5 ft and 261N at 107.5 ft; and isobutane at 320JN at 37.5 ft, 1901N at 77.5 ft, and 2801N at 107.5 ft.

c. Depths shown are proposed depths from the work plan (DOE-ID 1996). Actual sample depths are 11–14 ft, 41–46 ft, 66–69 ft, and 94–97 ft. An additional compound detected and its concentration in ppbv is 1,2-dichloro-1,1,2,2-tetrafluoroethane (F-114) at 17J at 107.5 ft.

d. Depths shown are proposed depths from the work plan (DOE-ID 1996). Actual sample depths are 15–18 ft, 39–42 ft, 64–67 ft, and 90–99 ft. Additional compounds detected and their concentrations in ppbv are 1,2-dichloropropane at 46 at 37.5 ft, 2-methyl-1-propene at 33JN at 37.5 ft, 3-methyl-, (E)-2-pentene at 27JN at 37.5 ft, freon-114 at 20J at 37.5 ft, isobutene at 510JN at 77.5 ft, chlorobenzene at 35 at 37.5 ft, and 1-chloro-1,1-difluoro-ethane at 1101N at 77.5 ft.

e. Depths shown are proposed depths from the work plan (DOE-ID 1996). Actual sample depths are 11–14 ft, 40–43 ft, 74–77 ft, and 101–104 ft. Additional compounds detected and their concentrations in ppbv are 1-hexene at 6JN at 77.5 ft; butane at 77 at 77.5 ft and 29 at 107.5 ft; 1,2-dichloro-1,1,2,2-tetrafluoroethane (F114) at 28J at 37.5 ft and 32 at 77.5 ft; decane at 33JN at 77.5 ft; undecane at 89JN at 77.5 ft; dodecane at 38 JN at 77.5 ft; 2,6-bis(1,1-dimethylethyl)-phenol at 23J at 77.5 ft; 2-methyl-pentane at 15 JN at 77.5 ft; and isobutane at 98JN at 12.5 ft.

f. Depths shown are proposed depths from the work plan (DOE-ID 1996). Actual sample depths are 9–12 ft, 44–47 ft, 68–71 ft, and 101–104 ft. Additional compounds detected and their concentrations in ppbv are 1,2-dichloro-1,1,2,2-tetrafluoroethane (F114) at 46 at 107.5 ft; N-(1-methyl-3-oxobutylidene)-4-meth at 36J at 77.5 ft; isobutene at 1,600 JN at 77.5 ft; butane at 340JN at 77.5 and 40 at 107.5 ft; 3-methyl-1-butanol at 851N at 77.5 ft; acetic acid, chlorofluoro- ethylene at 170JN at 37.5 ft; butane, 2,2-dimethyl- at 44JN at 77.5 ft; and ethane, 1-chloro-1,1-difluoro- at 300JN at 37.5 ft; and ethane, chlorodifluoro- at 56JN at 12.5 ft and 690JN at 37.5 ft.

ND = not detected.

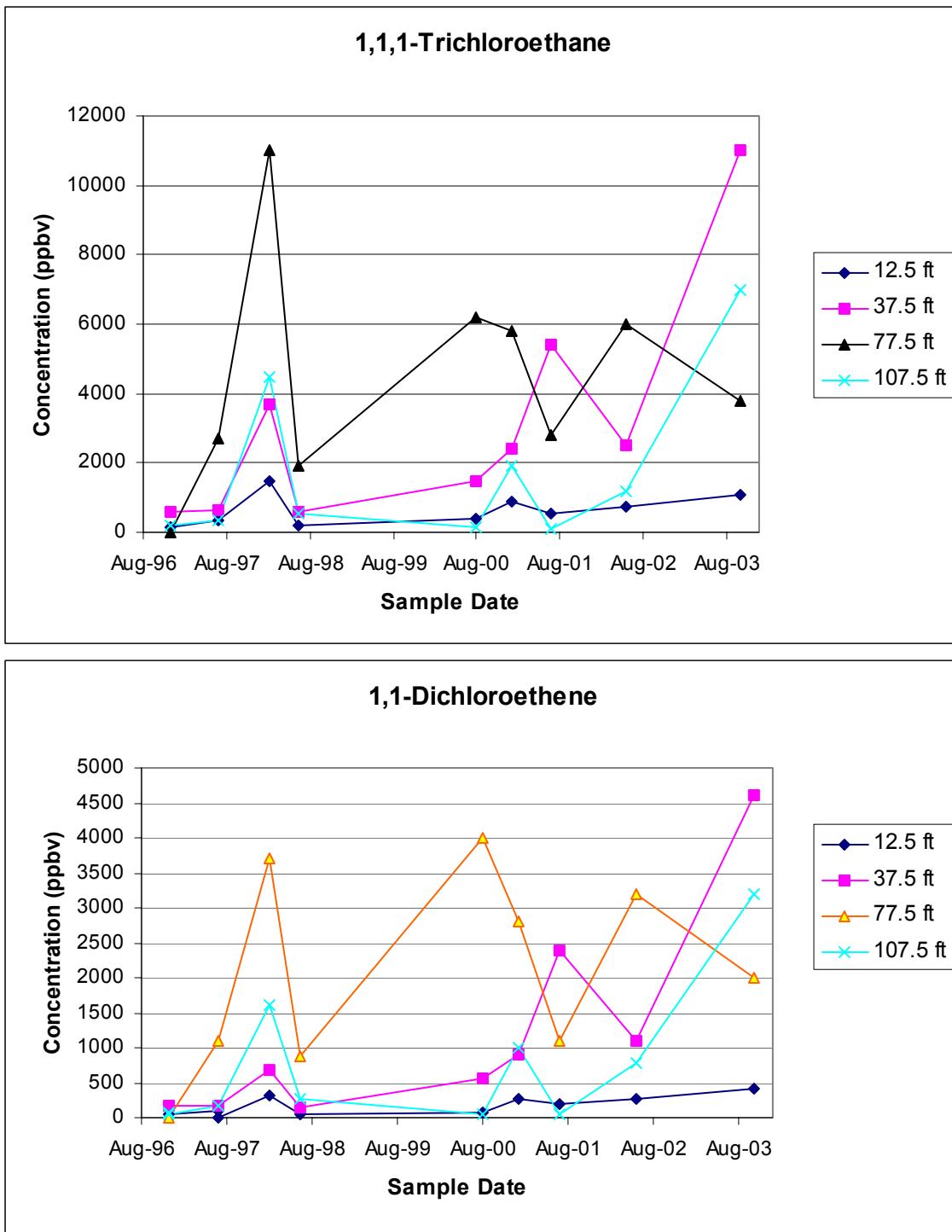


Figure 10. Vapor trends for select compounds in GSP1-1 (CFA-GAS-V-004) at Landfill I.

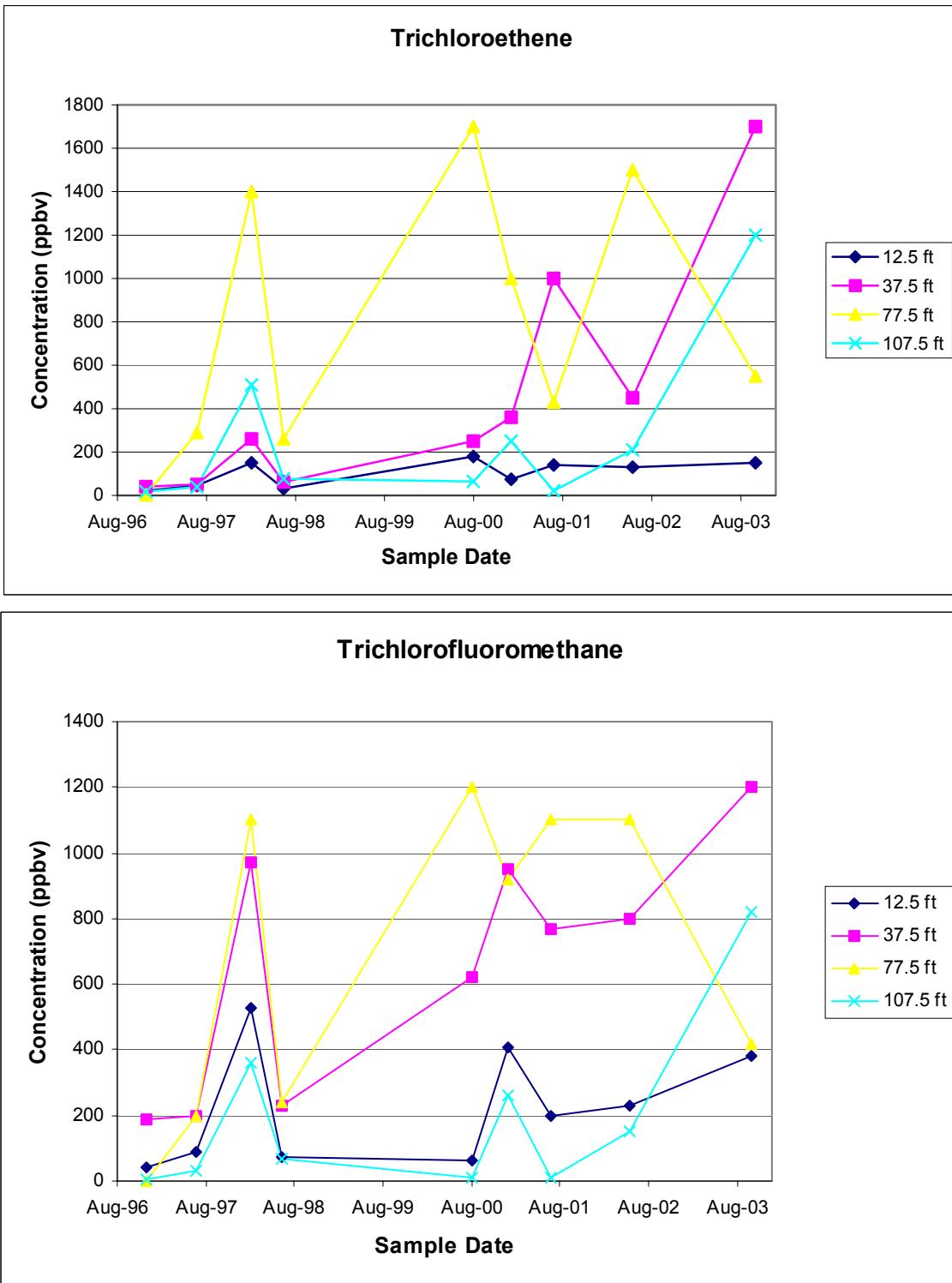


Figure 10. (continued).

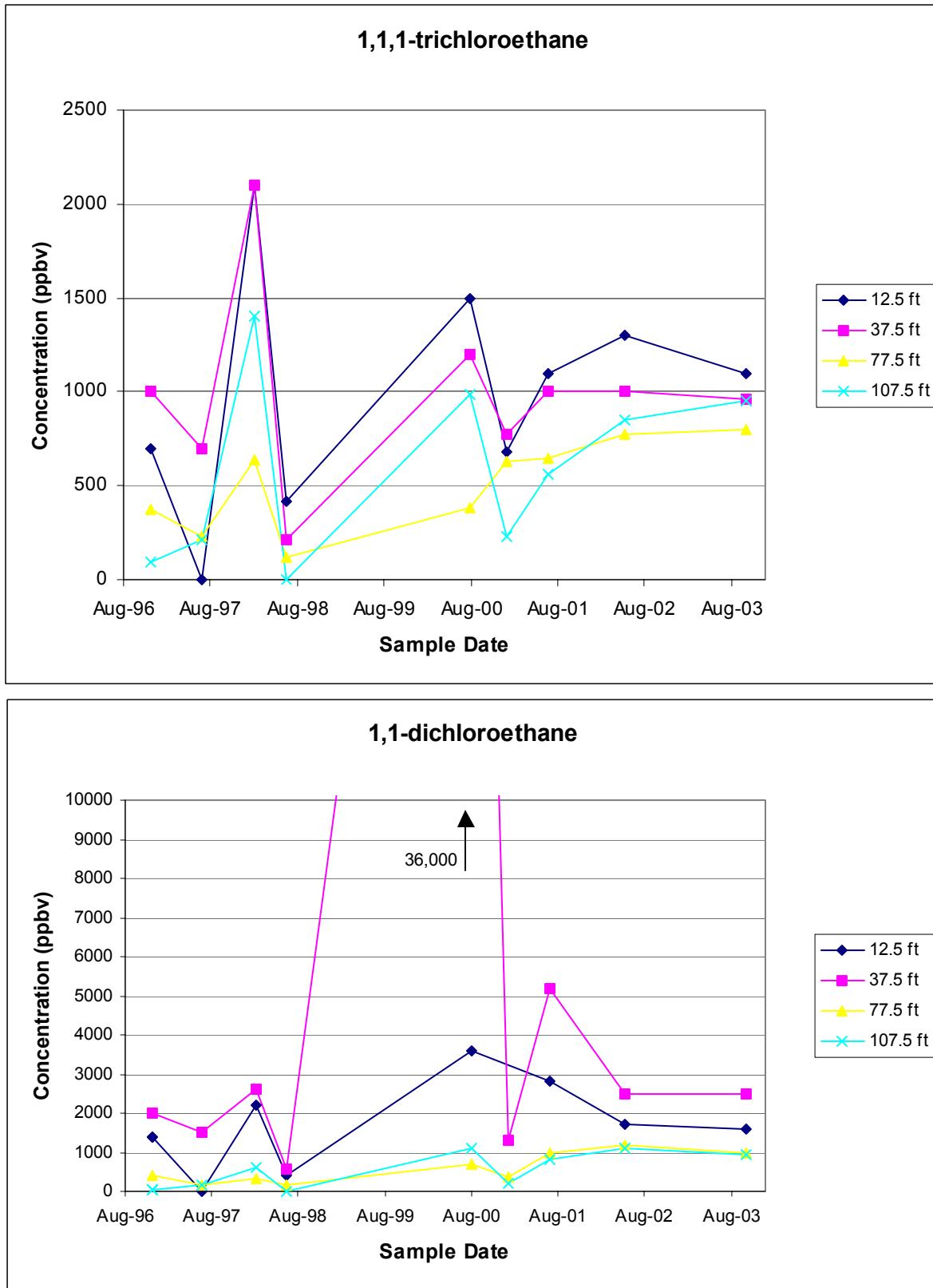


Figure 11. Trends for select compounds at GSP2-2 on Landfill II (CFA-GAS-V-006).

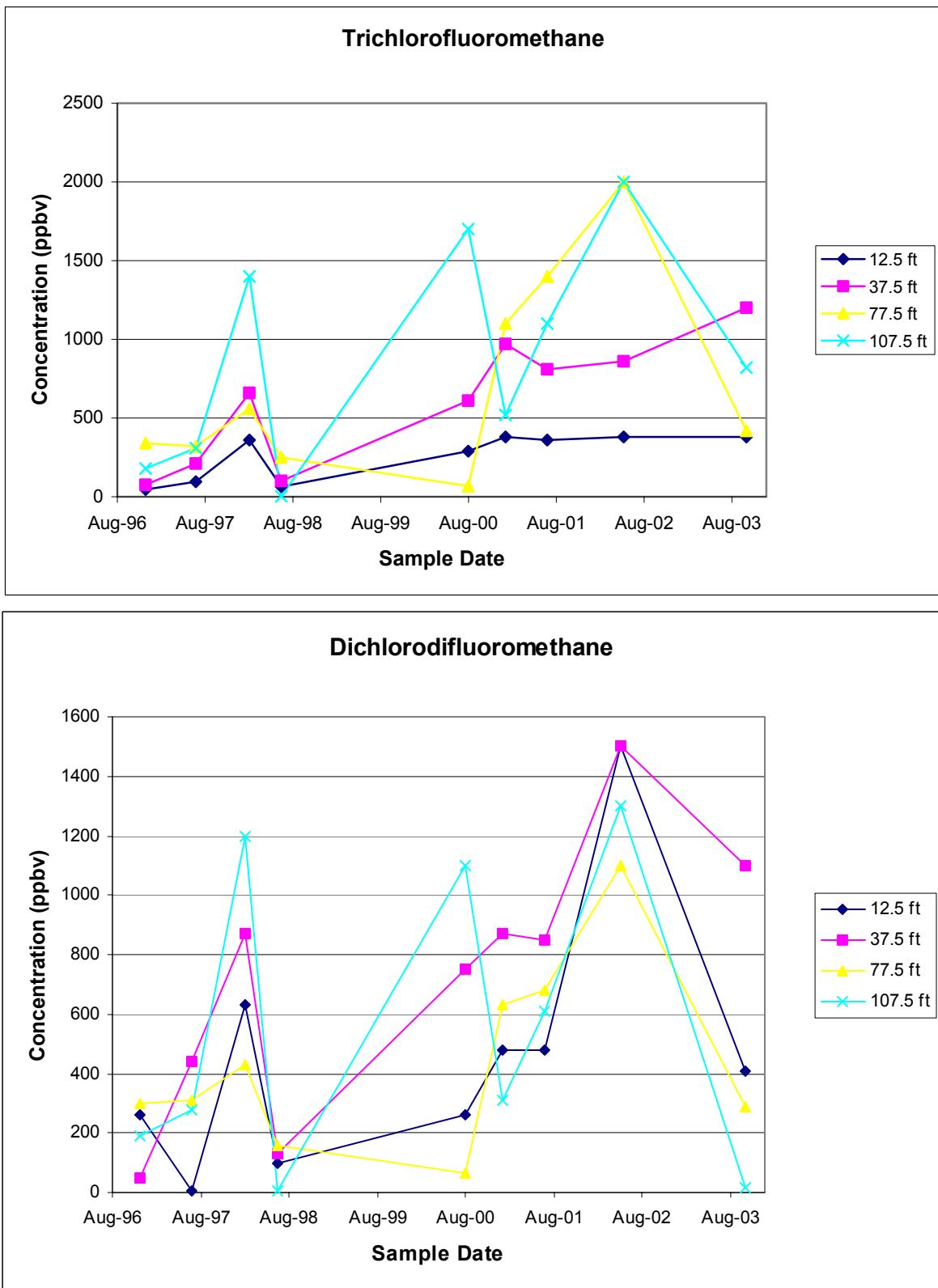


Figure 11. (continued).

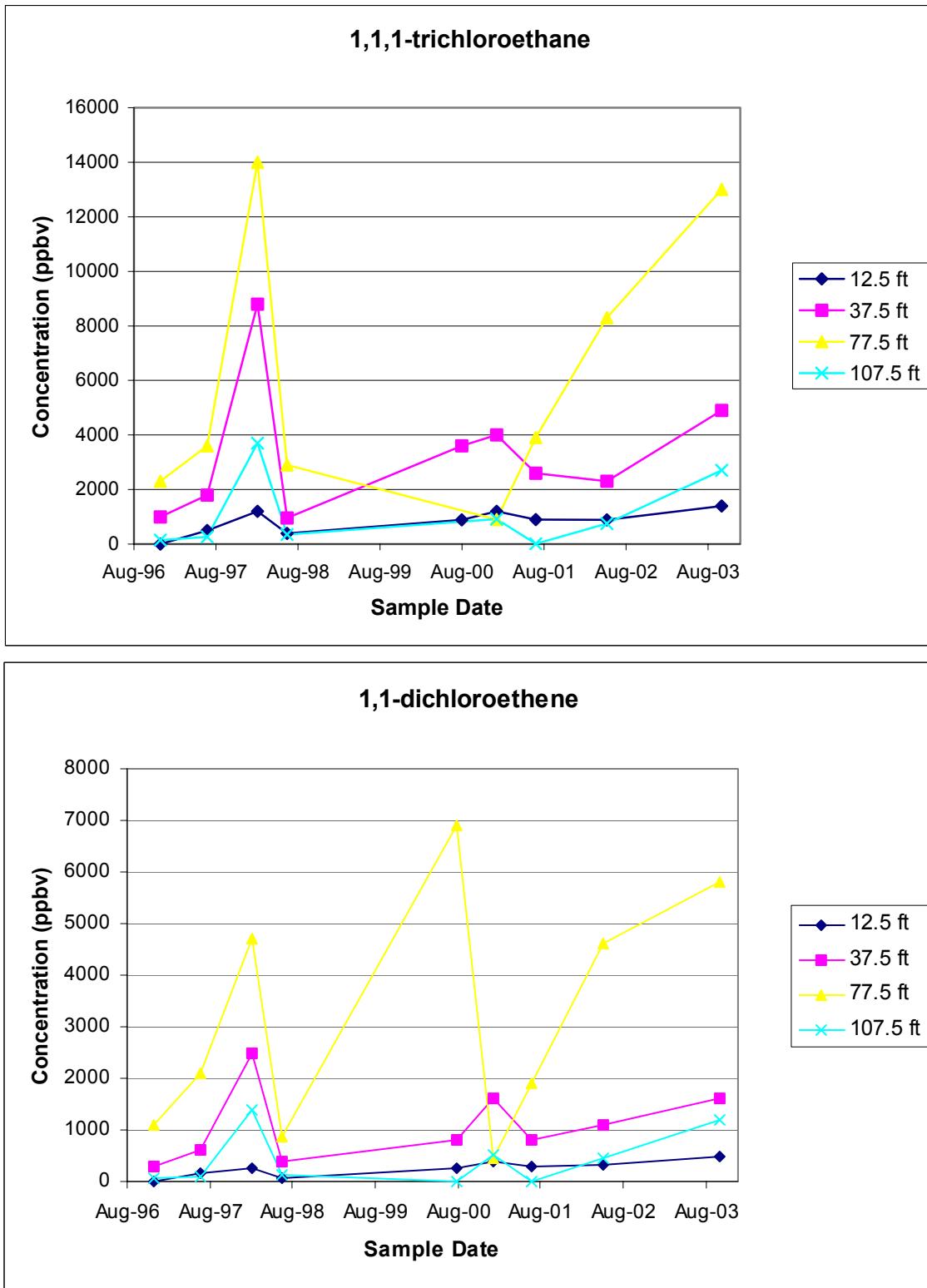


Figure 12. Trends for select compounds at GSP3-1 near Landfill III (CFA-GAS-007).

At GSP3-2, the compounds occurring at the highest concentrations were 1,1,1-trichloroethane, trichlorofluoromethane, and dichlorodifluoromethane. Figure 13 is provided to show the concentration trends for 1,1,1-trichloroethane and trichlorofluoromethane, because they occurred at high concentrations and show modest trends toward increasing concentrations at a depth of 77.5 ft. However, concentrations in 2003 for 1,1,1-trichloroethane and trichlorofluoromethane are still within historical limits.

The potential impacts of VOCs in soil gas at the CFA landfills can be evaluated by comparing deep soil-gas concentrations at the CFA landfills to the preliminary remediation goals (PRGs) calculated for the Subsurface Disposal Area (SDA), an INEEL site with geologic and hydrologic conditions similar to those at the landfills. The PRGs are the estimated maximum soil-gas concentrations that will not cause groundwater concentrations to exceed MCLs. The PRG range for carbon tetrachloride at the SDA is 30 to 200 parts per million by volume (ppmv) at 100 to 200 ft bls (DOE-ID 1994). The MCL for carbon tetrachloride is 5 μ g/L, the same as trichloroethene and tetrachloroethene. The MCL for 1,1,1-trichloroethane is 200 μ g/L. Given the similar geologic and hydrologic conditions at the sites and the similar nature of the contaminants (chlorinated solvents), it is reasonable to assume that the PRG calculated for the SDA can be applied at the CFA landfills to make rough approximations.

The maximum tetrachloroethene and trichloroethene concentrations measured in 2003 in the soil gas in the GSP wells at the CFA landfills were 0.60 and 1.7 ppmv, respectively. These concentrations are much lower than the PRG range calculated for carbon tetrachloride at the SDA for a similar depth. The maximum 1,1,1-trichloroethane concentration measured in the GSP wells is 13 ppmv. Although this value is closer to the PRG range calculated for the SDA, the MCL for 1,1,1-trichloroethane is 40 times higher than the MCL for tetrachloroethene, trichloroethene, and carbon tetrachloride. Given these comparisons, it is highly unlikely that the contamination in the vicinity of the GSP wells could adversely impact the SRPA.

It is recommended that “trigger” soil-gas concentrations to determine the need for vadose zone vapor modeling be calculated after soil-gas data near the groundwater are collected for WAG 7 and from the new CFA landfill wells. Calculating soil-gas concentrations that would trigger the need for modeling is complicated by the uncertainty over the partitioning of vapor into groundwater. The empirical relationship of the vapor concentration to the actual groundwater concentration could be used as a guide to get a better idea of the efficiency of the partitioning of the vapor into groundwater rather than relying on a calculation using Henry’s law. The equilibrium values predicted by Henry’s law will probably not be achieved, because vertical mixing is limited or extremely slow due to the relatively undisturbed groundwater surface resulting from laminar flow. It is anticipated that the trigger values will be proposed in fiscal year 2005 after the new CFA wells have been installed and the deep vapor ports sampled. It is assumed that WAG 7 will have collected soil gas data by the time the new CFA wells are installed and sampled.

4. MOISTURE MONITORING RESULTS

The overall objective of moisture monitoring at the CFA landfills is to document the effectiveness of the landfill covers in minimizing infiltration to the landfill wastes (INEEL 2003a). Infiltration was estimated using moisture measurements that were determined via neutron probe and TDR instruments. The locations of the four vertical TDR systems and the five NATs installed at CFA Landfills II and III are shown in Figure 9. The two vertical TDR arrays located on Landfill II are near NAT LF2-07. NAT LF2-07 is located on Landfill II, and LF2-03 is located on the edge of Landfill II. LF2-04 is located near Landfill II and is used for monitoring infiltration and recharge in native soil or background conditions. The two vertical TDRs on landfill III are installed through the cover near NAT LF3-05. NAT LF3-3 is located on the edge of Landfill III. The raw data and graphs of the moisture content data are presented in Appendix B.

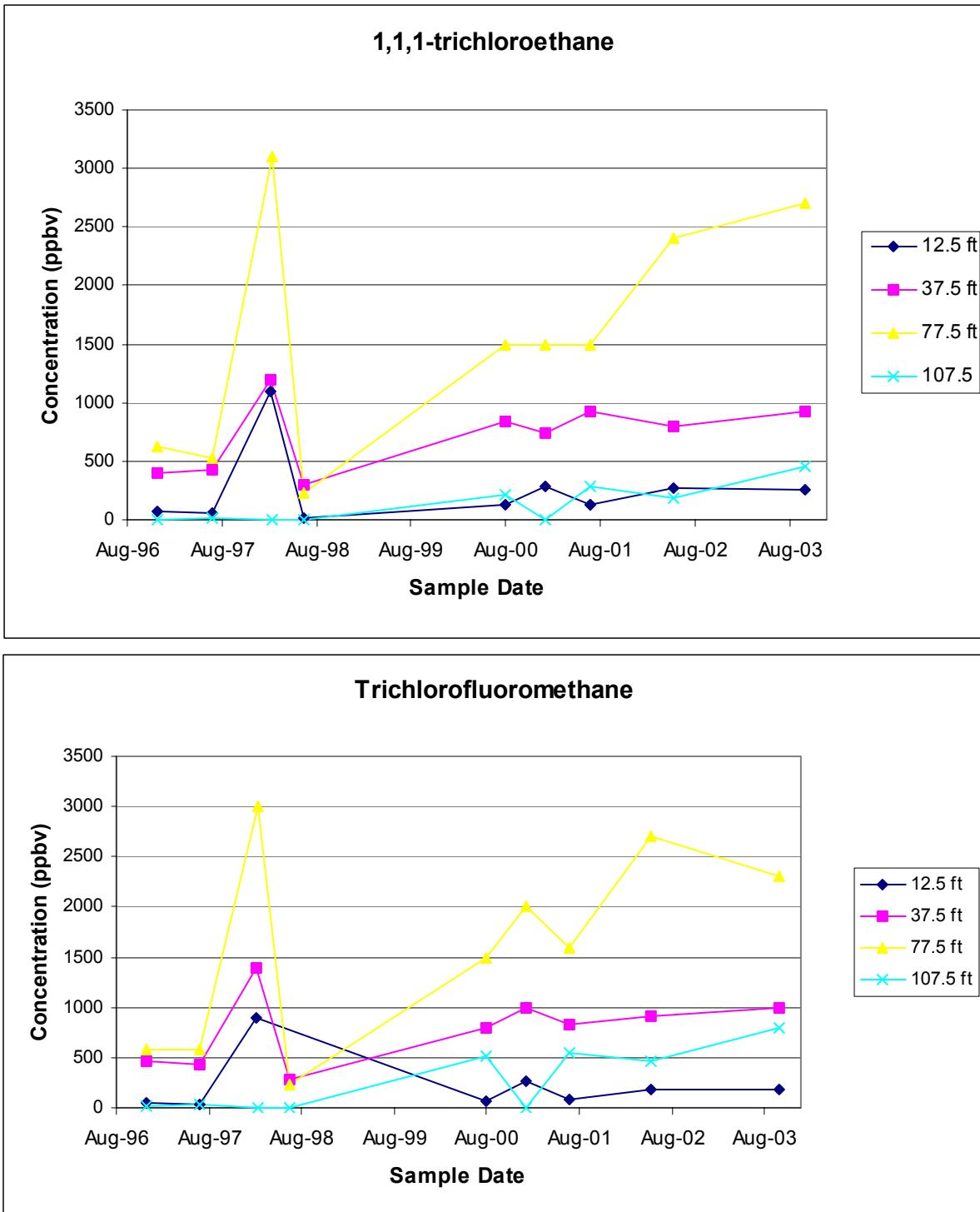


Figure 13. Concentration trends for select compounds at GSP3-2 near Landfill III (CFA-GAS-V-008).

The terms *infiltration*, *recharge*, and *drainage* are used throughout this section and are defined as follows. Water that moves into the soil is defined as *infiltration*. Water that continues to move downward beyond the ET depth and out of the soil profile is termed *recharge*. Infiltration and recharge are represented by an increase in water storage within a system. In addition to recharge, ET is a large

contributor to decreasing storage in near-surface soils, moving water upward and out of the soil. The term *drainage* refers to water movement out of a unit thickness of soil or a decrease in soil moisture but does not indicate the direction of movement. A detailed description of the calculations used to estimate infiltration, recharge, and drainage is provided in Appendix B.

4.1 Neutron-Probe Moisture Monitoring Results

The only measurable infiltration that penetrated beyond the first foot of soil occurred in the January to May 2003 period. Consequently, infiltration and recharge were only calculated for that period. These calculations also reflect recharge for the entire year. Based on the change in moisture content using the soil-moisture calibration equations and the assumed ET depth, the estimates of recharge for 2003 are less than 0.25 in. for all locations (Table 9). The recharge at LF2-04, the background location near CFA Landfill II, was also less than 0.25 in.

Changes in storage refer to changes in soil moisture over a period that represents a full moisture cycle (typically one year). Changes in storage at the NAT locations during the period from October 2002 to October 2003 indicate the moisture content over the soil profile monitored by the NATs decreased at all locations (Table 9). The change in water storage indicates that moisture contents decreased slightly within the landfill caps and the ET zones (net drainage).

4.2 TDR Monitoring Results

Infiltration, drainage, and changes in storage were calculated for the period from October 2002 to October 2003. The primary infiltration and recharge resulted from precipitation that fell between mid-January and May 2003. Unlike previous years, a distinct spring snowmelt did not occur. The infiltration and drainage results indicate that at three of the four TDR locations, the amount of infiltration is greater than the measured precipitation at the CFA National Oceanic and Atmospheric Administration (NOAA) weather station. The calculated infiltration for the TDR locations ranges from 1.05 to 1.91 in. (Table 9). The measured precipitation at the CFA NOAA weather station is 1.09 in. The reason for the difference between the measured precipitation at the CFA NOAA weather station and the amount of infiltration measured by the TDRs is uncertain. The high TDR readings could be related to probe calibration or to voids or desiccation cracks.

Moisture contents generally remained steady below the estimated ET depth of 4 ft (Table 9); therefore, no or little (i.e., less than 0.25 in.) recharge was indicated at the four TDR locations. The 3.5- to 4-ft interval at LF3-east showed an anomalous rise in soil moisture starting in July, but this significant increase did not show up in the 4- to 4.5-ft interval or the 3- to 3.5-ft interval. No intervals below 4 ft showed a significant increase in moisture content, suggesting that any recharge was slight and ET consumed most to all of the infiltrated water for 2003. Only winter-spring precipitation (mid-January to May 2003) had any effect beyond the 0- to 6-in. depth.

An evaluation of the water storage showed that little change occurred at the four TDR locations over the year. At CFA Landfills II and III, from depths of 4 to 8 ft or below the estimated ET depth of 4 ft, there was essentially no change in storage. There was little change in storage over the monitoring period for the 0- to 2-ft depth intervals for the landfill caps at the four TDR locations (Table 9). The two TDR locations at Landfill III showed a loss in storage for the 0- to 8-ft depth interval over the monitoring period, while the two TDRs at Landfill II showed a slight gain (Table 9). Changes in storage at CFA Landfill II were 0.25 and 0.27 in. At CFA Landfill III, changes in storage were -0.12 and -0.67 in.

Table 9. Summary of landfill cover NAT and TDR monitoring results.

	NAT Locations				TDR Locations				
	LF2-03	LF2-04	LF2-07	LF3-03	LF3-05	LF3-east	LF3-west	LF2-north	LF2-south
Spring 2003 infiltration event (in. of water)									
Infiltration	0.30	0.45	0.42	0.89	0.47	1.91	1.84	1.5	1.05
Recharge ^a	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	0.28 ^b	<0.25
Oct. 2002 to Oct. 2003 yearly drainage (in. of water)									
Total drainage	4.71	3.54	4.25	2.09	3.08	—	—	—	—
Within ET zone ^c	3.97	2.72	3.51	1.32	1.93	—	—	—	—
Change in storage from Oct. 2002 to Oct. 2003 (in. of water)									
Total	-0.30	-0.65	-1.41	-0.46	-0.17	-0.12	-0.67	0.25	0.27
Within cap	—	—	-0.06	-0.08	-0.17	-0.17	-0.25	-0.14	0.01
Within ET zone	-0.09	-0.01	-0.30	-0.08	-0.01	0.11	-0.45	-0.18	0.08
Below ET zone	-0.21	-0.64	-1.11	-0.38	-0.16	-0.23	-0.22	0.42	0.19

a. The amount of recharge is estimated to be the increase in moisture content below the ET depth.

b. This recharge is from one anomalous probe segment. Both the segment above and below showed no increase.

c. The ET depth is assumed to be 3 to 4 ft for the NATs and 4 ft for the TDRs.

TDR LF2-north showed one segment with 0.28 in. of recharge, LF2-south and NAT LF2-07 showed no recharge. The one segment in LF2-north that showed a moisture increase is suspicious, because the TDR signal became very noisy during the period when moisture started increasing. The increase in noise might indicate a problem with the probe.

4.3 Comparison of TDR and Neutron Probe Data

The TDR and the neutron probe data from Landfill III indicated no recharge below 4 ft. However, the amount of infiltration estimated using the TDR data was higher than infiltration for the NATs. The discrepancy between the estimated infiltration values for the TDRs and the neutron probe locations could be because the TDR probes have not been calibrated.

5. SUMMARY

Nitrate is the only constituent found to exceed a groundwater MCL during the 2003 CFA landfill monitoring effort. Over time, plots of nitrate concentrations in CFA-MON-A-002 and -003 show that the concentrations are remaining steady. Iron and aluminum were detected above SMCLs, but both appear to be associated with suspended particulates.

The water-level data and the nitrogen and oxygen isotope data suggest that the CFA-04 dry pond, rather than the CFA-08 sewage drainfield, is the source of the nitrate contamination in CFA-MON-A-002 and -003. However, more information is needed on the types and quantities of nitrate disposed of in the CFA-04 dry pond.

The most common VOCs detected in the soil-gas samples consisted of 1,1,1-trichloroethane, 1,1-dichloroethane, 1,1-dichloroethene, trichloroethene, dichlorodifluoromethane, and trichlorofluoromethane. The halogenated compounds are common solvents, constituents found in solvents, or freons. The VOC that occurred at the highest concentrations was 1,1,1-trichloroethane at 13,000 ppbv. Other solvents detected in the soil-gas samples included F-113, F-114, carbon tetrachloride, and tetrachloroethene. Cis-1,2-dichloroethene was also detected and frequently occurs as result of the anaerobic degradation of chlorinated ethenes like trichloroethene and tetrachloroethene. None of these VOCs were detected in the groundwater.

The TDR and neutron probe results for 2003 showed no recharge for CFA Landfills II and III. The background location, NAT LF2-04 located off CFA Landfill II, also showed no recharge.

6. RECOMMENDATIONS

The following are recommendations to improve the monitoring system for the CFA landfills:

- Infiltration through the landfill covers will be modeled to evaluate their long-term performance. The ability of the landfill covers to limit infiltration will be one of the modeling objectives. Additionally, modeling could be used to determine whether vegetation other than what is currently on the landfills would improve the covers. Modeling could also help determine how much infiltration can occur before significant concentrations of contaminants would be detected in the groundwater. In order to consider the sensitivity of vadose zone infiltration to plants and climatic conditions, a numerical model that has the ability to calculate the water balance at the surface of the soil is needed. That water balance is controlled by a combination of several factors but is primarily a balance between the water application rate (precipitation rate, frequency, and seasonality) and water removal rate via evaporation and transpiration. Numerical models typically

calculate that balance in one of two ways. The first assumes that the energy balance that controls water removal is largely unaffected by heat transfer into the soil, so that the potential for ET from the surface can be calculated from the rate at which energy is supplied. The model then calculates ET and transpiration based on that potential and the availability of water. Hydrus is one of several models that calculate infiltration in this manner; it also has a rather detailed plant water uptake implementation. The second approach does not assume that heat fluxes to/from the soil are negligible and instead calculates that heat flux by solving the heat flux and energy balance equations simultaneously. UNSAT-H v3 is an example of a code that can solve that system of equations, although it also uses the simpler, potential ET, approach. The simpler approach would be sufficient, because changes in ground surface temperature are relatively minor during the spring snowmelt season, the only period when significant infiltration is likely to occur. For that reason, either Hydrus-1D or UNSAT-H is acceptable. Use of the latter code would allow the opportunity to assess the sensitivity of the calculated net infiltration to the method used to calculate ET.

- “Trigger” soil-gas concentrations should be calculated to determine the need for vadose zone vapor modeling after soil-gas data near the groundwater are collected for WAG 7 and from the new CFA landfill wells. These data are needed, because the equilibrium values predicted by Henry’s law will probably not be achieved since vertical mixing is limited or extremely slow due to the relatively undisturbed nature of the groundwater surface. The “trigger” values will be developed after the new CFA wells have been installed and the deep vapor ports sampled. It is assumed that WAG 7 will have collected soil gas data by the time the new CFA wells are installed and sampled.
- The pumps in LF2-08, LF2-09, and LF2-11 should be lowered if possible. The current information suggests that the pumps could be lowered (see Table 5). The need for this will depend on water levels in the SRPA.
- It is recommended that USGS-111 be dropped from the water-level measurement list, because the well is highly deviated and water-level measurements from this well are not reliable.

The recommendations made in this section are scheduled to be addressed in fiscal year 2005.

7. REFERENCES

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Appendix A

Analytical Results

Appendix A

Analytical Results

This appendix presents the groundwater and soil-gas analytical results from monitoring conducted at Central Facilities Area Landfills I, II, and III. Sampling and analysis of groundwater occurred in November and December 2003. Soil-gas sampling was conducted on October 22, 2003. The complete set of groundwater and soil-gas data is provided on the compact disc attached to the inside back cover of this report. The data qualifier flags used in this appendix are defined as follows:

Organics

- B – the analyte was detected in the associated laboratory method blank as well as in the sample.
- D – the sample result is from a dilution.
- U – the analyte was analyzed for, but it was not detected.
- UJ – the analyte was analyzed for, but it was not detected. The associated value is an estimate and might be inaccurate or imprecise.
- J – the analyte was detected, but the associated values are an estimate and might be inaccurate or imprecise.
- N – there is presumptive evidence that a compound is present.
- NJ or JN – there is presumptive evidence that a compound is present and the associated values are estimates.
- R – the accuracy of the data is so questionable that it is recommended that the data not be used. The “R” flag overrides all other applicable flags.

Inorganics

- B – result is less than the contract-required reporting limit but greater than or equal to the instrument detection limit.
- E – reported value was estimated because of the presence of interference.
- N –spiked sample recovery was outside control limits.
- U – the analyte was not detected.
- UJ – the analyte was analyzed for, but it was not detected. The associated value is an estimate and might be inaccurate or imprecise.
- R – the accuracy of the data is so questionable that it is recommended that the data not be used. The “R” flag overrides all other applicable flags.

Field Sample Number	Location	Depth	Compound	Sample Result	Result Qualifier	Validation Flag	Sample Units	Date Sample Collected
4SG000013A	GSP1-1	12.5	1,1,1-Trichloroethane	1100	E		PPBV	10/23/2003
4SG000013A	GSP1-1	12.5	1,1,2,2-Tetrachloroethane	16	U		PPBV	10/23/2003
4SG000013A	GSP1-1	12.5	1,1,2-Trichloroethane	16	U		PPBV	10/23/2003
4SG000013A	GSP1-1	12.5	1,1-Dichloroethane	120			PPBV	10/23/2003
4SG000013A	GSP1-1	12.5	1,1-Dichloroethene	410			PPBV	10/23/2003
4SG000013A	GSP1-1	12.5	1,2,4-Trichlorobenzene	16	U		PPBV	10/23/2003
4SG000013A	GSP1-1	12.5	1,2,4-Trimethylbenzene	16	U		PPBV	10/23/2003
4SG000013A	GSP1-1	12.5	1,2-Dibromoethane	16	U		PPBV	10/23/2003
4SG000013A	GSP1-1	12.5	1,2-Dichlorobenzene	16	U		PPBV	10/23/2003
4SG000013A	GSP1-1	12.5	1,2-Dichloroethane	16	U		PPBV	10/23/2003
4SG000013A	GSP1-1	12.5	1,2-Dichloropropane	16	U		PPBV	10/23/2003
4SG000013A	GSP1-1	12.5	1,3,5-Trimethylbenzene	16	U		PPBV	10/23/2003
4SG000013A	GSP1-1	12.5	1,3-Dichlorobenzene	16	U		PPBV	10/23/2003
4SG000013A	GSP1-1	12.5	1,4-Dichlorobenzene	16	U		PPBV	10/23/2003
4SG000013A	GSP1-1	12.5	1-Propanol, 2-methyl-	120	JN	NJ	PPBV	10/23/2003
4SG000013A	GSP1-1	12.5	2-Butanone	16	U		PPBV	10/23/2003
4SG000013A	GSP1-1	12.5	2-Hexanone	16	U		PPBV	10/23/2003
4SG000013A	GSP1-1	12.5	4-Ethyltoluene	16	U		PPBV	10/23/2003
4SG000013A	GSP1-1	12.5	4-Methyl-2-pentanone	16	U		PPBV	10/23/2003
4SG000013A	GSP1-1	12.5	Acetone	16	U		PPBV	10/23/2003
4SG000013A	GSP1-1	12.5	Benzene	16	U		PPBV	10/23/2003
4SG000013A	GSP1-1	12.5	Benzyl chloride	16	U		PPBV	10/23/2003
4SG000013A	GSP1-1	12.5	Bromomethane	16	U		PPBV	10/23/2003
4SG000013A	GSP1-1	12.5	Carbon disulfide	16	U		PPBV	10/23/2003
4SG000013A	GSP1-1	12.5	Carbon tetrachloride	16	U		PPBV	10/23/2003
4SG000013A	GSP1-1	12.5	Chlorobenzene	16	U		PPBV	10/23/2003
4SG000013A	GSP1-1	12.5	Chloroethane	16	U		PPBV	10/23/2003
4SG000013A	GSP1-1	12.5	Chloroform	7	J	J	PPBV	10/23/2003
4SG000013A	GSP1-1	12.5	Chloromethane	16	U		PPBV	10/23/2003
4SG000013A	GSP1-1	12.5	cis-1,2-Dichloroethene	10	J	J	PPBV	10/23/2003
4SG000013A	GSP1-1	12.5	cis-1,3-Dichloropropene	16	U		PPBV	10/23/2003
4SG000013A	GSP1-1	12.5	Dichlorodifluoromethane	440			PPBV	10/23/2003
4SG000013A	GSP1-1	12.5	Ethane, 1,2-dichloro-1,1,2-trifluor	43	JN	NJ	PPBV	10/23/2003
4SG000013A	GSP1-1	12.5	Ethylbenzene	16	U		PPBV	10/23/2003
4SG000013A	GSP1-1	12.5	Freon 113	230			PPBV	10/23/2003
4SG000013A	GSP1-1	12.5	Freon 114	32	U		PPBV	10/23/2003
4SG000013A	GSP1-1	12.5	Hexachlorobutadiene	16	U		PPBV	10/23/2003
4SG000013A	GSP1-1	12.5	m,p-Xylenes	16	U		PPBV	10/23/2003
4SG000013A	GSP1-1	12.5	Methane, dichlorofluoro-	99	JN	NJ	PPBV	10/23/2003
4SG000013A	GSP1-1	12.5	Methylene Chloride	16	U		PPBV	10/23/2003
4SG000013A	GSP1-1	12.5	o-Xylene	16	U		PPBV	10/23/2003
4SG000013A	GSP1-1	12.5	Phenol	19	JN	NJ	PPBV	10/23/2003
4SG000013A	GSP1-1	12.5	Styrene	16	U		PPBV	10/23/2003
4SG000013A	GSP1-1	12.5	Tetrachloroethene	95			PPBV	10/23/2003
4SG000013A	GSP1-1	12.5	Toluene	16	U		PPBV	10/23/2003
4SG000013A	GSP1-1	12.5	trans-1,2-Dichloroethene	16	U		PPBV	10/23/2003
4SG000013A	GSP1-1	12.5	trans-1,3-Dichloropropene	16	U		PPBV	10/23/2003
4SG000013A	GSP1-1	12.5	Trichloroethene	150			PPBV	10/23/2003
4SG000013A	GSP1-1	12.5	Trichlorofluoromethane	380			PPBV	10/23/2003
4SG000013A	GSP1-1	12.5	UNKNOWN	26	J	J	PPBV	10/23/2003
4SG000013A	GSP1-1	12.5	Vinyl Chloride	16	U		PPBV	10/23/2003
4SG001013A	GSP1-1	37.5	1,1,1-Trichloroethane	11000	D		PPBV	10/23/2003
4SG001013A	GSP1-1	37.5	1,1,2,2-Tetrachloroethane	17	U		PPBV	10/23/2003
4SG001013A	GSP1-1	37.5	1,1,2-Trichloroethane	17	U		PPBV	10/23/2003
4SG001013A	GSP1-1	37.5	1,1-Dichloroethane	270			PPBV	10/23/2003
4SG001013A	GSP1-1	37.5	1,1-Dichloroethene	4600	D		PPBV	10/23/2003
4SG001013A	GSP1-1	37.5	1,2,4-Trichlorobenzene	17	U		PPBV	10/23/2003
4SG001013A	GSP1-1	37.5	1,2,4-Trimethylbenzene	17	U		PPBV	10/23/2003
4SG001013A	GSP1-1	37.5	1,2-Dibromoethane	17	U		PPBV	10/23/2003
4SG001013A	GSP1-1	37.5	1,2-Dichlorobenzene	17	U		PPBV	10/23/2003
4SG001013A	GSP1-1	37.5	1,2-Dichloroethane	17	U		PPBV	10/23/2003
4SG001013A	GSP1-1	37.5	1,2-Dichloropropane	17	U		PPBV	10/23/2003
4SG001013A	GSP1-1	37.5	1,3,5-Trimethylbenzene	17	U		PPBV	10/23/2003
4SG001013A	GSP1-1	37.5	1,3-Dichlorobenzene	17	U		PPBV	10/23/2003
4SG001013A	GSP1-1	37.5	1,4-Dichlorobenzene	17	U		PPBV	10/23/2003
4SG001013A	GSP1-1	37.5	2-Butanone	17	U		PPBV	10/23/2003
4SG001013A	GSP1-1	37.5	2-Hexanone	17	U		PPBV	10/23/2003
4SG001013A	GSP1-1	37.5	4-Ethyltoluene	17	U		PPBV	10/23/2003
4SG001013A	GSP1-1	37.5	4-Methyl-2-pentanone	17	U		PPBV	10/23/2003
4SG001013A	GSP1-1	37.5	Acetone	17	U		PPBV	10/23/2003
4SG001013A	GSP1-1	37.5	Benzene	17	U		PPBV	10/23/2003

Field Sample Number	Location	Depth	Compound	Sample Result	Result Qualifier	Validation Flag	Sample Units	Date Sample Collected
4SG001013A	GSP1-1	37.5	Benzyl chloride	17	U		PPBV	10/23/2003
4SG001013A	GSP1-1	37.5	Bromomethane	17	U		PPBV	10/23/2003
4SG001013A	GSP1-1	37.5	Butane	180	JN	NJ	PPBV	10/23/2003
4SG001013A	GSP1-1	37.5	Carbon disulfide	17	U		PPBV	10/23/2003
4SG001013A	GSP1-1	37.5	Carbon tetrachloride	12	J	J	PPBV	10/23/2003
4SG001013A	GSP1-1	37.5	Chlorobenzene	17	U		PPBV	10/23/2003
4SG001013A	GSP1-1	37.5	Chloroethane	17	U		PPBV	10/23/2003
4SG001013A	GSP1-1	37.5	Chloroform	28			PPBV	10/23/2003
4SG001013A	GSP1-1	37.5	Chloromethane	17	U		PPBV	10/23/2003
4SG001013A	GSP1-1	37.5	cis-1,2-Dichloroethene	8	J	J	PPBV	10/23/2003
4SG001013A	GSP1-1	37.5	cis-1,3-Dichloropropene	17	U		PPBV	10/23/2003
4SG001013A	GSP1-1	37.5	Dichlorodifluoromethane	770			PPBV	10/23/2003
4SG001013A	GSP1-1	37.5	Ethane, 1,2-dichloro-1,1,2-trifluor	130	JN	NJ	PPBV	10/23/2003
4SG001013A	GSP1-1	37.5	Ethane, 1-chloro-1,1-difluoro-	99	JN	NJ	PPBV	10/23/2003
4SG001013A	GSP1-1	37.5	Ethylbenzene	17	U		PPBV	10/23/2003
4SG001013A	GSP1-1	37.5	Freon 113	530			PPBV	10/23/2003
4SG001013A	GSP1-1	37.5	Freon 114	34	U		PPBV	10/23/2003
4SG001013A	GSP1-1	37.5	Hexachlorobutadiene	17	U		PPBV	10/23/2003
4SG001013A	GSP1-1	37.5	Isobutane	320	JN	NJ	PPBV	10/23/2003
4SG001013A	GSP1-1	37.5	m,p-Xylenes	17	U		PPBV	10/23/2003
4SG001013A	GSP1-1	37.5	Methane, dichlorofluoro-	280	JN	NJ	PPBV	10/23/2003
4SG001013A	GSP1-1	37.5	Methylene Chloride	17	U		PPBV	10/23/2003
4SG001013A	GSP1-1	37.5	o-Xylene	17	U		PPBV	10/23/2003
4SG001013A	GSP1-1	37.5	Pentane	90	JN	NJ	PPBV	10/23/2003
4SG001013A	GSP1-1	37.5	Pentane, 2-methyl-	29	JN	NJ	PPBV	10/23/2003
4SG001013A	GSP1-1	37.5	Phenol	25	JN	NJ	PPBV	10/23/2003
4SG001013A	GSP1-1	37.5	Styrene	17	U		PPBV	10/23/2003
4SG001013A	GSP1-1	37.5	Tetrachloroethene	66			PPBV	10/23/2003
4SG001013A	GSP1-1	37.5	Toluene	17	U		PPBV	10/23/2003
4SG001013A	GSP1-1	37.5	trans-1,2-Dichloroethene	17	U		PPBV	10/23/2003
4SG001013A	GSP1-1	37.5	trans-1,3-Dichloropropene	17	U		PPBV	10/23/2003
4SG001013A	GSP1-1	37.5	Trichloroethene	1700	D		PPBV	10/23/2003
4SG001013A	GSP1-1	37.5	Trichlorofluoromethane	1200	DJ		PPBV	10/23/2003
4SG001013A	GSP1-1	37.5	UNKNOWN	21	J	J	PPBV	10/23/2003
4SG001013A	GSP1-1	37.5	UNKNOWN	23	J	J	PPBV	10/23/2003
4SG001013A	GSP1-1	37.5	UNKNOWN	19	J	J	PPBV	10/23/2003
4SG001013A	GSP1-1	37.5	Vinyl Chloride	17	U		PPBV	10/23/2003
4SG002013A	GSP1-1	77.5	1,1,1-Trichloroethane	3800	D		PPBV	10/23/2003
4SG002013A	GSP1-1	77.5	1,1,2,2-Tetrachloroethane	16	U		PPBV	10/23/2003
4SG002013A	GSP1-1	77.5	1,1,2-Trichloroethane	16	U		PPBV	10/23/2003
4SG002013A	GSP1-1	77.5	1,1-Dichloroethane	23			PPBV	10/23/2003
4SG002013A	GSP1-1	77.5	1,1-Dichloroethene	2000	D		PPBV	10/23/2003
4SG002013A	GSP1-1	77.5	1,2,4-Trichlorobenzene	16	U		PPBV	10/23/2003
4SG002013A	GSP1-1	77.5	1,2,4-Trimethylbenzene	16	U		PPBV	10/23/2003
4SG002013A	GSP1-1	77.5	1,2-Dibromoethane	16	U		PPBV	10/23/2003
4SG002013A	GSP1-1	77.5	1,2-Dichlorobenzene	16	U		PPBV	10/23/2003
4SG002013A	GSP1-1	77.5	1,2-Dichloroethane	16	U		PPBV	10/23/2003
4SG002013A	GSP1-1	77.5	1,2-Dichloropropane	16	U		PPBV	10/23/2003
4SG002013A	GSP1-1	77.5	1,3,5-Trimethylbenzene	16	U		PPBV	10/23/2003
4SG002013A	GSP1-1	77.5	1,3-Dichlorobenzene	16	U		PPBV	10/23/2003
4SG002013A	GSP1-1	77.5	1,4-Dichlorobenzene	16	U		PPBV	10/23/2003
4SG002013A	GSP1-1	77.5	2-Butanone	16	U		PPBV	10/23/2003
4SG002013A	GSP1-1	77.5	2-Hexanone	16	U		PPBV	10/23/2003
4SG002013A	GSP1-1	77.5	4-Ethyltoluene	16	U		PPBV	10/23/2003
4SG002013A	GSP1-1	77.5	4-Methyl-2-pentanone	16	U		PPBV	10/23/2003
4SG002013A	GSP1-1	77.5	Acetone	16	U		PPBV	10/23/2003
4SG002013A	GSP1-1	77.5	Benzene	16	U		PPBV	10/23/2003
4SG002013A	GSP1-1	77.5	Benzyl chloride	16	U		PPBV	10/23/2003
4SG002013A	GSP1-1	77.5	Bromomethane	16	U		PPBV	10/23/2003
4SG002013A	GSP1-1	77.5	Carbon disulfide	16	U		PPBV	10/23/2003
4SG002013A	GSP1-1	77.5	Carbon tetrachloride	16	U		PPBV	10/23/2003
4SG002013A	GSP1-1	77.5	Chlorobenzene	16	U		PPBV	10/23/2003
4SG002013A	GSP1-1	77.5	Chloroethane	16	U		PPBV	10/23/2003
4SG002013A	GSP1-1	77.5	Chloroform	7	J	J	PPBV	10/23/2003
4SG002013A	GSP1-1	77.5	Chloromethane	16	U		PPBV	10/23/2003
4SG002013A	GSP1-1	77.5	cis-1,2-Dichloroethene	16	U		PPBV	10/23/2003
4SG002013A	GSP1-1	77.5	cis-1,3-Dichloropropene	16	U		PPBV	10/23/2003
4SG002013A	GSP1-1	77.5	Dichlorodifluoromethane	320			PPBV	10/23/2003
4SG002013A	GSP1-1	77.5	Ethane, 1-chloro-1,1-difluoro-	33	JN	NJ	PPBV	10/23/2003
4SG002013A	GSP1-1	77.5	Ethylbenzene	16	U		PPBV	10/23/2003
4SG002013A	GSP1-1	77.5	Freon 113	210			PPBV	10/23/2003

Field Sample Number	Location	Depth	Compound	Sample Result	Result Qualifier	Validation Flag	Sample Units	Date Sample Collected
4SG002013A	GSP1-1	77.5	Freon 114	31	U		PPBV	10/23/2003
4SG002013A	GSP1-1	77.5	Hexachlorobutadiene	16	U		PPBV	10/23/2003
4SG002013A	GSP1-1	77.5	Isobutane	190	JN	NJ	PPBV	10/23/2003
4SG002013A	GSP1-1	77.5	m,p-Xylenes	16	U		PPBV	10/23/2003
4SG002013A	GSP1-1	77.5	Methane, dichlorofluoro-	38	JN	NJ	PPBV	10/23/2003
4SG002013A	GSP1-1	77.5	Methylene Chloride	16	U		PPBV	10/23/2003
4SG002013A	GSP1-1	77.5	o-Xylene	16	U		PPBV	10/23/2003
4SG002013A	GSP1-1	77.5	Styrene	16	U		PPBV	10/23/2003
4SG002013A	GSP1-1	77.5	Tetrachloroethene	7	J	J	PPBV	10/23/2003
4SG002013A	GSP1-1	77.5	Toluene	16	U		PPBV	10/23/2003
4SG002013A	GSP1-1	77.5	trans-1,2-Dichloroethene	16	U		PPBV	10/23/2003
4SG002013A	GSP1-1	77.5	trans-1,3-Dichloropropene	16	U		PPBV	10/23/2003
4SG002013A	GSP1-1	77.5	Trichloroethene	550			PPBV	10/23/2003
4SG002013A	GSP1-1	77.5	Trichlorofluoromethane	420			PPBV	10/23/2003
4SG002013A	GSP1-1	77.5	UNKNOWN	47	J	J	PPBV	10/23/2003
4SG002013A	GSP1-1	77.5	Vinyl Chloride	16	U		PPBV	10/23/2003
4SG003013A	GSP1-1	107.5	1,1,1-Trichloroethane	7000	D		PPBV	10/23/2003
4SG003013A	GSP1-1	107.5	1,1,2,2-Tetrachloroethane	16	U		PPBV	10/23/2003
4SG003013A	GSP1-1	107.5	1,1,2-Trichloroethane	16	U		PPBV	10/23/2003
4SG003013A	GSP1-1	107.5	1,1-Dichloroethane	220			PPBV	10/23/2003
4SG003013A	GSP1-1	107.5	1,1-Dichloroethene	3200	D		PPBV	10/23/2003
4SG003013A	GSP1-1	107.5	1,2,4-Trichlorobenzene	16	U		PPBV	10/23/2003
4SG003013A	GSP1-1	107.5	1,2,4-Trimethylbenzene	16	U		PPBV	10/23/2003
4SG003013A	GSP1-1	107.5	1,2-Dibromoethane	16	U		PPBV	10/23/2003
4SG003013A	GSP1-1	107.5	1,2-Dichlorobenzene	16	U		PPBV	10/23/2003
4SG003013A	GSP1-1	107.5	1,2-Dichloroethane	16	U		PPBV	10/23/2003
4SG003013A	GSP1-1	107.5	1,2-Dichloropropane	16	U		PPBV	10/23/2003
4SG003013A	GSP1-1	107.5	1,3,5-Trimethylbenzene	16	U		PPBV	10/23/2003
4SG003013A	GSP1-1	107.5	1,3-Dichlorobenzene	16	U		PPBV	10/23/2003
4SG003013A	GSP1-1	107.5	1,4-Dichlorobenzene	16	U		PPBV	10/23/2003
4SG003013A	GSP1-1	107.5	2-Butanone	16	U		PPBV	10/23/2003
4SG003013A	GSP1-1	107.5	2-Hexanone	16	U		PPBV	10/23/2003
4SG003013A	GSP1-1	107.5	4-Ethyltoluene	16	U		PPBV	10/23/2003
4SG003013A	GSP1-1	107.5	4-Methyl-2-pentanone	16	U		PPBV	10/23/2003
4SG003013A	GSP1-1	107.5	Acetone	16	U		PPBV	10/23/2003
4SG003013A	GSP1-1	107.5	Benzene	16	U		PPBV	10/23/2003
4SG003013A	GSP1-1	107.5	Benzyl chloride	16	U		PPBV	10/23/2003
4SG003013A	GSP1-1	107.5	Bromomethane	16	U		PPBV	10/23/2003
4SG003013A	GSP1-1	107.5	Butane	130	JN	NJ	PPBV	10/23/2003
4SG003013A	GSP1-1	107.5	Butane, 2-methyl-	41	JN	NJ	PPBV	10/23/2003
4SG003013A	GSP1-1	107.5	Carbon disulfide	16	U		PPBV	10/23/2003
4SG003013A	GSP1-1	107.5	Carbon tetrachloride	10	J	J	PPBV	10/23/2003
4SG003013A	GSP1-1	107.5	Chlorobenzene	16	U		PPBV	10/23/2003
4SG003013A	GSP1-1	107.5	Chloroethane	16	U		PPBV	10/23/2003
4SG003013A	GSP1-1	107.5	Chloroform	23			PPBV	10/23/2003
4SG003013A	GSP1-1	107.5	Chloromethane	16	U		PPBV	10/23/2003
4SG003013A	GSP1-1	107.5	cis-1,2-Dichloroethene	7	J	J	PPBV	10/23/2003
4SG003013A	GSP1-1	107.5	cis-1,3-Dichloropropene	16	U		PPBV	10/23/2003
4SG003013A	GSP1-1	107.5	Dichlorodifluoromethane	350	JN		PPBV	10/23/2003
4SG003013A	GSP1-1	107.5	DICHLORODIFLUOROMETHANE	350	JN	NJ	PPBV	10/23/2003
4SG003013A	GSP1-1	107.5	Dichlorodifluoromethane	350	JN	NJ	PPBV	10/23/2003
4SG003013A	GSP1-1	107.5	Ethane, 1,2-dichloro-1,1,2-trifluor	55	JN	NJ	PPBV	10/23/2003
4SG003013A	GSP1-1	107.5	Ethane, 1-chloro-1,1-difluoro-	71	JN	NJ	PPBV	10/23/2003
4SG003013A	GSP1-1	107.5	Ethylbenzene	16	U		PPBV	10/23/2003
4SG003013A	GSP1-1	107.5	Freon 113	430			PPBV	10/23/2003
4SG003013A	GSP1-1	107.5	Freon 114	32	U		PPBV	10/23/2003
4SG003013A	GSP1-1	107.5	Hexachlorobutadiene	16	U		PPBV	10/23/2003
4SG003013A	GSP1-1	107.5	Isobutane	280	JN	NJ	PPBV	10/23/2003
4SG003013A	GSP1-1	107.5	m,p-Xylenes	16	U		PPBV	10/23/2003
4SG003013A	GSP1-1	107.5	Methane, dichlorofluoro-	240	JN	NJ	PPBV	10/23/2003
4SG003013A	GSP1-1	107.5	Methylene Chloride	16	U		PPBV	10/23/2003
4SG003013A	GSP1-1	107.5	o-Xylene	16	U		PPBV	10/23/2003
4SG003013A	GSP1-1	107.5	Pentane	71	JN	NJ	PPBV	10/23/2003
4SG003013A	GSP1-1	107.5	Pentane, 2-methyl-	26	JN	NJ	PPBV	10/23/2003
4SG003013A	GSP1-1	107.5	Phenol	27	JN	NJ	PPBV	10/23/2003
4SG003013A	GSP1-1	107.5	Propane	49	JN	NJ	PPBV	10/23/2003
4SG003013A	GSP1-1	107.5	Styrene	16	U		PPBV	10/23/2003
4SG003013A	GSP1-1	107.5	Tetrachloroethene	58			PPBV	10/23/2003
4SG003013A	GSP1-1	107.5	Toluene	16	U		PPBV	10/23/2003
4SG003013A	GSP1-1	107.5	trans-1,2-Dichloroethene	16	U		PPBV	10/23/2003
4SG003013A	GSP1-1	107.5	trans-1,3-Dichloropropene	16	U		PPBV	10/23/2003

Field Sample Number	Location	Depth	Compound	Sample Result	Result Qualifier	Validation Flag	Sample Units	Date Sample Collected
4SG003013A	GSP1-1	107.5	Trichloroethene	1200	D		PPBV	10/23/2003
4SG003013A	GSP1-1	107.5	Trichlorofluoromethane	820	D		PPBV	10/23/2003
4SG003013A	GSP1-1	107.5	UNKNOWN	43	J	J	PPBV	10/23/2003
4SG003013A	GSP1-1	107.5	Vinyl Chloride	16	U		PPBV	10/23/2003
4SG003013A	GSP1-1	107.5	Methane	0.76	U	U	PERCENT	10/23/2003
4SG000013A	GSP1-1	12.5	Methane	0.76	U	U	PERCENT	10/23/2003
4SG001013A	GSP1-1	37.5	Methane	0.76	U	U	PERCENT	10/23/2003
4SG002013A	GSP1-1	77.5	Methane	0.76	U	U	PERCENT	10/23/2003
4SG004013A	GSP2-1	12.5	1,1,1-Trichloroethane	14	J	J	PPBV	10/23/2003
4SG004023A	GSP2-1	12.5	1,1,1-Trichloroethane	15	J	J	PPBV	10/23/2003
4SG004013A	GSP2-1	12.5	1,1,2,2-Tetrachloroethane	15	U		PPBV	10/23/2003
4SG004023A	GSP2-1	12.5	1,1,2,2-Tetrachloroethane	16	U		PPBV	10/23/2003
4SG004013A	GSP2-1	12.5	1,1,2-Trichloroethane	15	U		PPBV	10/23/2003
4SG004023A	GSP2-1	12.5	1,1,2-Trichloroethane	16	U		PPBV	10/23/2003
4SG004013A	GSP2-1	12.5	1,1-Dichloroethane	15	U		PPBV	10/23/2003
4SG004023A	GSP2-1	12.5	1,1-Dichloroethane	16	U		PPBV	10/23/2003
4SG004013A	GSP2-1	12.5	1,1-Dichloroethene	15	U		PPBV	10/23/2003
4SG004023A	GSP2-1	12.5	1,1-Dichloroethene	16	U		PPBV	10/23/2003
4SG004013A	GSP2-1	12.5	1,2,4-Trichlorobenzene	15	U		PPBV	10/23/2003
4SG004023A	GSP2-1	12.5	1,2,4-Trichlorobenzene	16	U		PPBV	10/23/2003
4SG004013A	GSP2-1	12.5	1,2,4-Trimethylbenzene	15	U		PPBV	10/23/2003
4SG004023A	GSP2-1	12.5	1,2,4-Trimethylbenzene	16	U		PPBV	10/23/2003
4SG004013A	GSP2-1	12.5	1,2-Dibromoethane	15	U		PPBV	10/23/2003
4SG004023A	GSP2-1	12.5	1,2-Dibromoethane	16	U		PPBV	10/23/2003
4SG004013A	GSP2-1	12.5	1,2-Dichlorobenzene	15	U		PPBV	10/23/2003
4SG004023A	GSP2-1	12.5	1,2-Dichlorobenzene	16	U		PPBV	10/23/2003
4SG004013A	GSP2-1	12.5	1,2-Dichloroethane	15	U		PPBV	10/23/2003
4SG004023A	GSP2-1	12.5	1,2-Dichloroethane	16	U		PPBV	10/23/2003
4SG004013A	GSP2-1	12.5	1,2-Dichloropropane	15	U		PPBV	10/23/2003
4SG004023A	GSP2-1	12.5	1,2-Dichloropropane	16	U		PPBV	10/23/2003
4SG004013A	GSP2-1	12.5	1,3,5-Trimethylbenzene	15	U		PPBV	10/23/2003
4SG004023A	GSP2-1	12.5	1,3,5-Trimethylbenzene	16	U		PPBV	10/23/2003
4SG004013A	GSP2-1	12.5	1,3-Dichlorobenzene	15	U		PPBV	10/23/2003
4SG004023A	GSP2-1	12.5	1,3-Dichlorobenzene	16	U		PPBV	10/23/2003
4SG004013A	GSP2-1	12.5	1,4-Dichlorobenzene	15	U		PPBV	10/23/2003
4SG004023A	GSP2-1	12.5	1,4-Dichlorobenzene	16	U		PPBV	10/23/2003
4SG004013A	GSP2-1	12.5	2-Butanone	15	U		PPBV	10/23/2003
4SG004023A	GSP2-1	12.5	2-Butanone	16	U		PPBV	10/23/2003
4SG004013A	GSP2-1	12.5	2-Hexanone	15	U		PPBV	10/23/2003
4SG004023A	GSP2-1	12.5	2-Hexanone	16	U		PPBV	10/23/2003
4SG004013A	GSP2-1	12.5	4-Ethyltoluene	15	U		PPBV	10/23/2003
4SG004023A	GSP2-1	12.5	4-Ethyltoluene	16	U		PPBV	10/23/2003
4SG004013A	GSP2-1	12.5	4-Methyl-2-pentanone	15	U		PPBV	10/23/2003
4SG004023A	GSP2-1	12.5	4-Methyl-2-pentanone	16	U		PPBV	10/23/2003
4SG004013A	GSP2-1	12.5	Acetone	15	U		PPBV	10/23/2003
4SG004023A	GSP2-1	12.5	Acetone	16	U		PPBV	10/23/2003
4SG004013A	GSP2-1	12.5	Benzene	15	U		PPBV	10/23/2003
4SG004023A	GSP2-1	12.5	Benzene	16	U		PPBV	10/23/2003
4SG004013A	GSP2-1	12.5	Benzyl chloride	15	U		PPBV	10/23/2003
4SG004023A	GSP2-1	12.5	Benzyl chloride	16	U		PPBV	10/23/2003
4SG004013A	GSP2-1	12.5	Bromomethane	15	U		PPBV	10/23/2003
4SG004023A	GSP2-1	12.5	Bromomethane	16	U		PPBV	10/23/2003
4SG004013A	GSP2-1	12.5	Carbon disulfide	15	U		PPBV	10/23/2003
4SG004023A	GSP2-1	12.5	Carbon disulfide	16	U		PPBV	10/23/2003
4SG004013A	GSP2-1	12.5	Carbon tetrachloride	15	U		PPBV	10/23/2003
4SG004023A	GSP2-1	12.5	Carbon tetrachloride	16	U		PPBV	10/23/2003
4SG004013A	GSP2-1	12.5	Chlorobenzene	15	U		PPBV	10/23/2003
4SG004023A	GSP2-1	12.5	Chlorobenzene	16	U		PPBV	10/23/2003
4SG004013A	GSP2-1	12.5	Chloroethane	15	U		PPBV	10/23/2003
4SG004023A	GSP2-1	12.5	Chloroethane	16	U		PPBV	10/23/2003
4SG004013A	GSP2-1	12.5	Chloroform	15	U		PPBV	10/23/2003
4SG004023A	GSP2-1	12.5	Chloroform	16	U		PPBV	10/23/2003
4SG004013A	GSP2-1	12.5	Chloromethane	15	U		PPBV	10/23/2003
4SG004023A	GSP2-1	12.5	Chloromethane	16	U		PPBV	10/23/2003
4SG004013A	GSP2-1	12.5	cis-1,2-Dichloroethene	15	U		PPBV	10/23/2003
4SG004023A	GSP2-1	12.5	cis-1,2-Dichloroethene	16	U		PPBV	10/23/2003
4SG004013A	GSP2-1	12.5	cis-1,3-Dichloropropene	15	U		PPBV	10/23/2003
4SG004023A	GSP2-1	12.5	cis-1,3-Dichloropropene	16	U		PPBV	10/23/2003
4SG004013A	GSP2-1	12.5	Dichlorodifluoromethane	200			PPBV	10/23/2003
4SG004023A	GSP2-1	12.5	Dichlorodifluoromethane	74			PPBV	10/23/2003
4SG004023A	GSP2-1	12.5	Dichlorodifluoromethane	170	JN	NJ	PPBV	10/23/2003

Field Sample Number	Location	Depth	Compound	Sample Result	Result Qualifier	Validation Flag	Sample Units	Date Sample Collected
4SG004013A	GSP2-1	12.5	Ethylbenzene	15	U		PPBV	10/23/2003
4SG004023A	GSP2-1	12.5	Ethylbenzene	16	U		PPBV	10/23/2003
4SG004013A	GSP2-1	12.5	Freon 113	21			PPBV	10/23/2003
4SG004023A	GSP2-1	12.5	Freon 113	24			PPBV	10/23/2003
4SG004013A	GSP2-1	12.5	Freon 114	30	U		PPBV	10/23/2003
4SG004023A	GSP2-1	12.5	Freon 114	31	U		PPBV	10/23/2003
4SG004013A	GSP2-1	12.5	Hexachlorobutadiene	15	U		PPBV	10/23/2003
4SG004023A	GSP2-1	12.5	Hexachlorobutadiene	16	U		PPBV	10/23/2003
4SG004013A	GSP2-1	12.5	m,p-Xylenes	15	U		PPBV	10/23/2003
4SG004023A	GSP2-1	12.5	m,p-Xylenes	16	U		PPBV	10/23/2003
4SG004013A	GSP2-1	12.5	Methylene Chloride	15	U		PPBV	10/23/2003
4SG004023A	GSP2-1	12.5	Methylene Chloride	16	U		PPBV	10/23/2003
4SG004013A	GSP2-1	12.5	o-Xylene	15	U		PPBV	10/23/2003
4SG004023A	GSP2-1	12.5	o-Xylene	16	U		PPBV	10/23/2003
4SG004013A	GSP2-1	12.5	Phenol	17	JN	NJ	PPBV	10/23/2003
4SG004023A	GSP2-1	12.5	Phenol	28	JN	NJ	PPBV	10/23/2003
4SG004013A	GSP2-1	12.5	Styrene	15	U		PPBV	10/23/2003
4SG004023A	GSP2-1	12.5	Styrene	16	U		PPBV	10/23/2003
4SG004013A	GSP2-1	12.5	Tetrachloroethene	59			PPBV	10/23/2003
4SG004023A	GSP2-1	12.5	Tetrachloroethene	58			PPBV	10/23/2003
4SG004013A	GSP2-1	12.5	Toluene	15	U		PPBV	10/23/2003
4SG004023A	GSP2-1	12.5	Toluene	16	U		PPBV	10/23/2003
4SG004013A	GSP2-1	12.5	trans-1,2-Dichloroethene	15	U		PPBV	10/23/2003
4SG004023A	GSP2-1	12.5	trans-1,2-Dichloroethene	16	U		PPBV	10/23/2003
4SG004013A	GSP2-1	12.5	trans-1,3-Dichloropropene	15	U		PPBV	10/23/2003
4SG004023A	GSP2-1	12.5	trans-1,3-Dichloropropene	16	U		PPBV	10/23/2003
4SG004013A	GSP2-1	12.5	Trichloroethene	42			PPBV	10/23/2003
4SG004023A	GSP2-1	12.5	Trichloroethene	46			PPBV	10/23/2003
4SG004013A	GSP2-1	12.5	Trichlorofluoromethane	64			PPBV	10/23/2003
4SG004023A	GSP2-1	12.5	Trichlorofluoromethane	72			PPBV	10/23/2003
4SG004013A	GSP2-1	12.5	UNKNOWN	36	J	J	PPBV	10/23/2003
4SG004023A	GSP2-1	12.5	UNKNOWN	96	J	J	PPBV	10/23/2003
4SG004023A	GSP2-1	12.5	UNKNOWN	33	J	J	PPBV	10/23/2003
4SG004013A	GSP2-1	12.5	Vinyl Chloride	15	U		PPBV	10/23/2003
4SG004023A	GSP2-1	12.5	Vinyl Chloride	16	U		PPBV	10/23/2003
4SG005013A	GSP2-1	37.5	1,1,1-Trichloroethane	35			PPBV	10/23/2003
4SG005013A	GSP2-1	37.5	1,1,2,2-Tetrachloroethane	17	U		PPBV	10/23/2003
4SG005013A	GSP2-1	37.5	1,1,2-Trichloroethane	17	U		PPBV	10/23/2003
4SG005013A	GSP2-1	37.5	1,1-Dichloroethane	17	U		PPBV	10/23/2003
4SG005013A	GSP2-1	37.5	1,1-Dichloroethene	17	U		PPBV	10/23/2003
4SG005013A	GSP2-1	37.5	1,2,4-Trichlorobenzene	17	U		PPBV	10/23/2003
4SG005013A	GSP2-1	37.5	1,2,4-Trimethylbenzene	17	U		PPBV	10/23/2003
4SG005013A	GSP2-1	37.5	1,2-Dibromoethane	17	U		PPBV	10/23/2003
4SG005013A	GSP2-1	37.5	1,2-Dichlorobenzene	17	U		PPBV	10/23/2003
4SG005013A	GSP2-1	37.5	1,2-Dichloroethane	17	U		PPBV	10/23/2003
4SG005013A	GSP2-1	37.5	1,2-Dichloropropane	17	U		PPBV	10/23/2003
4SG005013A	GSP2-1	37.5	1,3,5-Trimethylbenzene	17	U		PPBV	10/23/2003
4SG005013A	GSP2-1	37.5	1,3-Dichlorobenzene	17	U		PPBV	10/23/2003
4SG005013A	GSP2-1	37.5	1,4-Dichlorobenzene	17	U		PPBV	10/23/2003
4SG005013A	GSP2-1	37.5	2-Butanone	17	U		PPBV	10/23/2003
4SG005013A	GSP2-1	37.5	2-Hexanone	17	U		PPBV	10/23/2003
4SG005013A	GSP2-1	37.5	4-Ethyltoluene	17	U		PPBV	10/23/2003
4SG005013A	GSP2-1	37.5	4-Methyl-2-pentanone	17	U		PPBV	10/23/2003
4SG005013A	GSP2-1	37.5	Acetone	17	U		PPBV	10/23/2003
4SG005013A	GSP2-1	37.5	Benzene	17	U		PPBV	10/23/2003
4SG005013A	GSP2-1	37.5	Benzyl chloride	17	U		PPBV	10/23/2003
4SG005013A	GSP2-1	37.5	Bromomethane	17	U		PPBV	10/23/2003
4SG005013A	GSP2-1	37.5	Carbon disulfide	17	U		PPBV	10/23/2003
4SG005013A	GSP2-1	37.5	Carbon tetrachloride	12	J		PPBV	10/23/2003
4SG005013A	GSP2-1	37.5	Chlorobenzene	17	U		PPBV	10/23/2003
4SG005013A	GSP2-1	37.5	Chloroethane	17	U		PPBV	10/23/2003
4SG005013A	GSP2-1	37.5	Chloroform	17	U		PPBV	10/23/2003
4SG005013A	GSP2-1	37.5	Chloromethane	17	U		PPBV	10/23/2003
4SG005013A	GSP2-1	37.5	cis-1,2-Dichloroethene	17	U		PPBV	10/23/2003
4SG005013A	GSP2-1	37.5	cis-1,3-Dichloropropene	17	U		PPBV	10/23/2003
4SG005013A	GSP2-1	37.5	Dichlorodifluoromethane	310			PPBV	10/23/2003
4SG005013A	GSP2-1	37.5	Ethylbenzene	17	U		PPBV	10/23/2003
4SG005013A	GSP2-1	37.5	Freon 113	29			PPBV	10/23/2003
4SG005013A	GSP2-1	37.5	Freon 114	34	U		PPBV	10/23/2003
4SG005013A	GSP2-1	37.5	Hexachlorobutadiene	17	U		PPBV	10/23/2003
4SG005013A	GSP2-1	37.5	m,p-Xylenes	17	U		PPBV	10/23/2003

Field Sample Number	Location	Depth	Compound	Sample Result	Result Qualifier	Validation Flag	Sample Units	Date Sample Collected
4SG005013A	GSP2-1	37.5	Methylene Chloride	17	U		PPBV	10/23/2003
4SG005013A	GSP2-1	37.5	o-Xylene	17	U		PPBV	10/23/2003
4SG005013A	GSP2-1	37.5	Phenol	28	JN	NJ	PPBV	10/23/2003
4SG005013A	GSP2-1	37.5	Styrene	17	U		PPBV	10/23/2003
4SG005013A	GSP2-1	37.5	Tetrachloroethene	92			PPBV	10/23/2003
4SG005013A	GSP2-1	37.5	Toluene	17	U		PPBV	10/23/2003
4SG005013A	GSP2-1	37.5	trans-1,2-Dichloroethene	17	U		PPBV	10/23/2003
4SG005013A	GSP2-1	37.5	trans-1,3-Dichloropropene	17	U		PPBV	10/23/2003
4SG005013A	GSP2-1	37.5	Trichloroethene	33			PPBV	10/23/2003
4SG005013A	GSP2-1	37.5	Trichlorofluoromethane	65			PPBV	10/23/2003
4SG005013A	GSP2-1	37.5	UNKNOWN	24	J	J	PPBV	10/23/2003
4SG005013A	GSP2-1	37.5	Vinyl Chloride	17	U		PPBV	10/23/2003
4SG006013A	GSP2-1	77.5	1,1,1-Trichloroethane	170			PPBV	10/23/2003
4SG006013A	GSP2-1	77.5	1,1,2,2-Tetrachloroethane	17	U		PPBV	10/23/2003
4SG006013A	GSP2-1	77.5	1,1,2-Trichloroethane	17	U		PPBV	10/23/2003
4SG006013A	GSP2-1	77.5	1,1-Dichloroethane	57			PPBV	10/23/2003
4SG006013A	GSP2-1	77.5	1,1-Dichloroethene	17	U		PPBV	10/23/2003
4SG006013A	GSP2-1	77.5	1,2,4-Trichlorobenzene	17	U		PPBV	10/23/2003
4SG006013A	GSP2-1	77.5	1,2,4-Trimethylbenzene	17	U		PPBV	10/23/2003
4SG006013A	GSP2-1	77.5	1,2-Dibromoethane	17	U		PPBV	10/23/2003
4SG006013A	GSP2-1	77.5	1,2-Dichlorobenzene	17	U		PPBV	10/23/2003
4SG006013A	GSP2-1	77.5	1,2-Dichloroethane	17	U		PPBV	10/23/2003
4SG006013A	GSP2-1	77.5	1,2-Dichloropropane	17	U		PPBV	10/23/2003
4SG006013A	GSP2-1	77.5	1,3,5-Trimethylbenzene	17	U		PPBV	10/23/2003
4SG006013A	GSP2-1	77.5	1,3-Dichlorobenzene	17	U		PPBV	10/23/2003
4SG006013A	GSP2-1	77.5	1,4-Dichlorobenzene	17	U		PPBV	10/23/2003
4SG006013A	GSP2-1	77.5	2-Butanone	17	U		PPBV	10/23/2003
4SG006013A	GSP2-1	77.5	2-Hexanone	17	U		PPBV	10/23/2003
4SG006013A	GSP2-1	77.5	4-Ethyltoluene	17	U		PPBV	10/23/2003
4SG006013A	GSP2-1	77.5	4-Methyl-2-pentanone	17	U		PPBV	10/23/2003
4SG006013A	GSP2-1	77.5	Acetone	17	U		PPBV	10/23/2003
4SG006013A	GSP2-1	77.5	Benzene	17	U		PPBV	10/23/2003
4SG006013A	GSP2-1	77.5	Benzyl chloride	17	U		PPBV	10/23/2003
4SG006013A	GSP2-1	77.5	Bromomethane	17	U		PPBV	10/23/2003
4SG006013A	GSP2-1	77.5	Carbon disulfide	17	U		PPBV	10/23/2003
4SG006013A	GSP2-1	77.5	Carbon tetrachloride	52			PPBV	10/23/2003
4SG006013A	GSP2-1	77.5	Chlorobenzene	17	U		PPBV	10/23/2003
4SG006013A	GSP2-1	77.5	Chloroethane	17	U		PPBV	10/23/2003
4SG006013A	GSP2-1	77.5	Chloroform	23			PPBV	10/23/2003
4SG006013A	GSP2-1	77.5	Chloromethane	17	U		PPBV	10/23/2003
4SG006013A	GSP2-1	77.5	cis-1,2-Dichloroethene	17	U		PPBV	10/23/2003
4SG006013A	GSP2-1	77.5	cis-1,3-Dichloropropene	17	U		PPBV	10/23/2003
4SG006013A	GSP2-1	77.5	Dichlorodifluoromethane	730			PPBV	10/23/2003
4SG006013A	GSP2-1	77.5	Ethane, 1,2-dichloro-1,1,2-trifluor	36	JN	NJ	PPBV	10/23/2003
4SG006013A	GSP2-1	77.5	Ethylbenzene	17	U		PPBV	10/23/2003
4SG006013A	GSP2-1	77.5	Freon 113	93			PPBV	10/23/2003
4SG006013A	GSP2-1	77.5	Freon 114	34	U		PPBV	10/23/2003
4SG006013A	GSP2-1	77.5	Hexachlorobutadiene	17	U		PPBV	10/23/2003
4SG006013A	GSP2-1	77.5	m,p-Xylenes	17	U		PPBV	10/23/2003
4SG006013A	GSP2-1	77.5	Methane, dichlorofluoro-	41	JN	NJ	PPBV	10/23/2003
4SG006013A	GSP2-1	77.5	Methylene Chloride	17	U		PPBV	10/23/2003
4SG006013A	GSP2-1	77.5	o-Xylene	17	U		PPBV	10/23/2003
4SG006013A	GSP2-1	77.5	Styrene	17	U		PPBV	10/23/2003
4SG006013A	GSP2-1	77.5	Tetrachloroethene	180			PPBV	10/23/2003
4SG006013A	GSP2-1	77.5	Toluene	17	U		PPBV	10/23/2003
4SG006013A	GSP2-1	77.5	trans-1,2-Dichloroethene	17	U		PPBV	10/23/2003
4SG006013A	GSP2-1	77.5	trans-1,3-Dichloropropene	17	U		PPBV	10/23/2003
4SG006013A	GSP2-1	77.5	Trichloroethene	47			PPBV	10/23/2003
4SG006013A	GSP2-1	77.5	Trichlorofluoromethane	190			PPBV	10/23/2003
4SG006013A	GSP2-1	77.5	UNKNOWN	23	J	J	PPBV	10/23/2003
4SG006013A	GSP2-1	77.5	Vinyl Chloride	17	U		PPBV	10/23/2003
4SG007013A	GSP2-1	107.5	1,1,1-Trichloroethane	220			PPBV	10/23/2003
4SG007013A	GSP2-1	107.5	1,1,2,2-Tetrachloroethane	16	U		PPBV	10/23/2003
4SG007013A	GSP2-1	107.5	1,1,2-Trichloroethane	16	U		PPBV	10/23/2003
4SG007013A	GSP2-1	107.5	1,1-Dichloroethane	100			PPBV	10/23/2003
4SG007013A	GSP2-1	107.5	1,1-Dichloroethene	10	J	J	PPBV	10/23/2003
4SG007013A	GSP2-1	107.5	1,2,4-Trichlorobenzene	16	U		PPBV	10/23/2003
4SG007013A	GSP2-1	107.5	1,2,4-Trimethylbenzene	16	U		PPBV	10/23/2003
4SG007013A	GSP2-1	107.5	1,2-Dibromoethane	16	U		PPBV	10/23/2003
4SG007013A	GSP2-1	107.5	1,2-Dichlorobenzene	16	U		PPBV	10/23/2003
4SG007013A	GSP2-1	107.5	1,2-Dichloroethane	16	U		PPBV	10/23/2003

Field Sample Number	Location	Depth	Compound	Sample Result	Result Qualifier	Validation Flag	Sample Units	Date Sample Collected
4SG007013A	GSP2-1	107.5	1,2-Dichloropropane	16	U		PPBV	10/23/2003
4SG007013A	GSP2-1	107.5	1,3,5-Trimethylbenzene	16	U		PPBV	10/23/2003
4SG007013A	GSP2-1	107.5	1,3-Dichlorobenzene	16	U		PPBV	10/23/2003
4SG007013A	GSP2-1	107.5	1,4-Dichlorobenzene	16	U		PPBV	10/23/2003
4SG007013A	GSP2-1	107.5	2-Butanone	16	U		PPBV	10/23/2003
4SG007013A	GSP2-1	107.5	2-Hexanone	16	U		PPBV	10/23/2003
4SG007013A	GSP2-1	107.5	4-Ethyltoluene	16	U		PPBV	10/23/2003
4SG007013A	GSP2-1	107.5	4-Methyl-2-pentanone	16	U		PPBV	10/23/2003
4SG007013A	GSP2-1	107.5	Acetone	16	U		PPBV	10/23/2003
4SG007013A	GSP2-1	107.5	Benzene	16	U		PPBV	10/23/2003
4SG007013A	GSP2-1	107.5	Benzyl chloride	16	U		PPBV	10/23/2003
4SG007013A	GSP2-1	107.5	Bromomethane	16	U		PPBV	10/23/2003
4SG007013A	GSP2-1	107.5	Carbon disulfide	16	U		PPBV	10/23/2003
4SG007013A	GSP2-1	107.5	Carbon tetrachloride	62			PPBV	10/23/2003
4SG007013A	GSP2-1	107.5	Chlorobenzene	16	U		PPBV	10/23/2003
4SG007013A	GSP2-1	107.5	Chloroethane	16	U		PPBV	10/23/2003
4SG007013A	GSP2-1	107.5	Chloroform	36			PPBV	10/23/2003
4SG007013A	GSP2-1	107.5	Chloromethane	16	U		PPBV	10/23/2003
4SG007013A	GSP2-1	107.5	cis-1,2-Dichloroethene	16	U		PPBV	10/23/2003
4SG007013A	GSP2-1	107.5	cis-1,3-Dichloropropene	16	U		PPBV	10/23/2003
4SG007013A	GSP2-1	107.5	Dichlorodifluoromethane	820	D		PPBV	10/23/2003
4SG007013A	GSP2-1	107.5	Ethane, 1,2-dichloro-1,1,2-trifluor	42	JN	NJ	PPBV	10/23/2003
4SG007013A	GSP2-1	107.5	Ethylbenzene	16	U		PPBV	10/23/2003
4SG007013A	GSP2-1	107.5	Freon 113	130			PPBV	10/23/2003
4SG007013A	GSP2-1	107.5	Freon 114	17	J	J	PPBV	10/23/2003
4SG007013A	GSP2-1	107.5	Hexachlorobutadiene	16	U		PPBV	10/23/2003
4SG007013A	GSP2-1	107.5	m,p-Xylenes	16	U		PPBV	10/23/2003
4SG007013A	GSP2-1	107.5	Methane, dichlorofluoro-	50	JN	NJ	PPBV	10/23/2003
4SG007013A	GSP2-1	107.5	Methylene Chloride	16	U		PPBV	10/23/2003
4SG007013A	GSP2-1	107.5	o-Xylene	16	U		PPBV	10/23/2003
4SG007013A	GSP2-1	107.5	Styrene	16	U		PPBV	10/23/2003
4SG007013A	GSP2-1	107.5	Tetrachloroethene	210			PPBV	10/23/2003
4SG007013A	GSP2-1	107.5	Toluene	16	U		PPBV	10/23/2003
4SG007013A	GSP2-1	107.5	trans-1,2-Dichloroethene	16	U		PPBV	10/23/2003
4SG007013A	GSP2-1	107.5	trans-1,3-Dichloropropene	16	U		PPBV	10/23/2003
4SG007013A	GSP2-1	107.5	Trichloroethene	76			PPBV	10/23/2003
4SG007013A	GSP2-1	107.5	Trichlorofluoromethane	260			PPBV	10/23/2003
4SG007013A	GSP2-1	107.5	UNKNOWN	28	J	J	PPBV	10/23/2003
4SG007013A	GSP2-1	107.5	UNKNOWN	19	J	J	PPBV	10/23/2003
4SG007013A	GSP2-1	107.5	Vinyl Chloride	16	U		PPBV	10/23/2003
4SG007013A	GSP2-1	107.5	Methane	0.76	U	U	PERCENT	10/23/2003
4SG004013A	GSP2-1	12.5	Methane	0.76	U	U	PERCENT	10/23/2003
4SG004023A	GSP2-1	12.5	Methane	0.76	U	U	PERCENT	10/23/2003
4SG005013A	GSP2-1	37.5	Methane	0.76	U	U	PERCENT	10/23/2003
4SG006013A	GSP2-1	77.5	Methane	0.76	U	U	PERCENT	10/23/2003
4SG008013A	GSP2-2	12.5	1,1,1-Trichloroethane	1100	D		PPBV	10/23/2003
4SG008013A	GSP2-2	12.5	1,1,2,2-Tetrachloroethane	160	U		PPBV	10/23/2003
4SG008013A	GSP2-2	12.5	1,1,2-Trichloroethane	160	U		PPBV	10/23/2003
4SG008013A	GSP2-2	12.5	1,1-Dichloroethane	1600	D		PPBV	10/23/2003
4SG008013A	GSP2-2	12.5	1,1-Dichloroethene	120	DJ	J	PPBV	10/23/2003
4SG008013A	GSP2-2	12.5	1,2,4-Trichlorobenzene	160	U		PPBV	10/23/2003
4SG008013A	GSP2-2	12.5	1,2,4-Trimethylbenzene	160	U		PPBV	10/23/2003
4SG008013A	GSP2-2	12.5	1,2-Dibromoethane	160	U		PPBV	10/23/2003
4SG008013A	GSP2-2	12.5	1,2-Dichlorobenzene	160	U		PPBV	10/23/2003
4SG008013A	GSP2-2	12.5	1,2-Dichloroethane	160	U		PPBV	10/23/2003
4SG008013A	GSP2-2	12.5	1,2-Dichloropropane	160	U		PPBV	10/23/2003
4SG008013A	GSP2-2	12.5	1,3,5-Trimethylbenzene	160	U		PPBV	10/23/2003
4SG008013A	GSP2-2	12.5	1,3-Dichlorobenzene	160	U		PPBV	10/23/2003
4SG008013A	GSP2-2	12.5	1,4-Dichlorobenzene	160	U		PPBV	10/23/2003
4SG008013A	GSP2-2	12.5	2-Butanone	160	U		PPBV	10/23/2003
4SG008013A	GSP2-2	12.5	2-Hexanone	160	U		PPBV	10/23/2003
4SG008013A	GSP2-2	12.5	4-Ethyltoluene	160	U		PPBV	10/23/2003
4SG008013A	GSP2-2	12.5	4-Methyl-2-pentanone	160	U		PPBV	10/23/2003
4SG008013A	GSP2-2	12.5	Acetone	160	U		PPBV	10/23/2003
4SG008013A	GSP2-2	12.5	Benzene	160	U		PPBV	10/23/2003
4SG008013A	GSP2-2	12.5	Benzyl chloride	160	U		PPBV	10/23/2003
4SG008013A	GSP2-2	12.5	Bromomethane	160	U		PPBV	10/23/2003
4SG008013A	GSP2-2	12.5	Carbon disulfide	160	U		PPBV	10/23/2003
4SG008013A	GSP2-2	12.5	Carbon tetrachloride	160	U		PPBV	10/23/2003
4SG008013A	GSP2-2	12.5	Chlorobenzene	160	U		PPBV	10/23/2003
4SG008013A	GSP2-2	12.5	Chloroethane	160	U		PPBV	10/23/2003

Field Sample Number	Location	Depth	Compound	Sample Result	Result Qualifier	Validation Flag	Sample Units	Date Sample Collected
4SG008013A	GSP2-2	12.5	Chloroform	160	U		PPBV	10/23/2003
4SG008013A	GSP2-2	12.5	Chloromethane	160	U		PPBV	10/23/2003
4SG008013A	GSP2-2	12.5	cis-1,2-Dichloroethene	1900	D		PPBV	10/23/2003
4SG008013A	GSP2-2	12.5	cis-1,3-Dichloropropene	160	U		PPBV	10/23/2003
4SG008013A	GSP2-2	12.5	Dichlorodifluoromethane	410	D	U	PPBV	10/23/2003
4SG008013A	GSP2-2	12.5	Ethylbenzene	160	U		PPBV	10/23/2003
4SG008013A	GSP2-2	12.5	Freon 113	67	DJ	J	PPBV	10/23/2003
4SG008013A	GSP2-2	12.5	Freon 114	310	U		PPBV	10/23/2003
4SG008013A	GSP2-2	12.5	Hexachlorobutadiene	160	U		PPBV	10/23/2003
4SG008013A	GSP2-2	12.5	m,p-Xylenes	160	U		PPBV	10/23/2003
4SG008013A	GSP2-2	12.5	Methylene Chloride	390	U		PPBV	10/23/2003
4SG008013A	GSP2-2	12.5	o-Xylene	160	U		PPBV	10/23/2003
4SG008013A	GSP2-2	12.5	Styrene	160	U		PPBV	10/23/2003
4SG008013A	GSP2-2	12.5	Tetrachloroethene	190	D		PPBV	10/23/2003
4SG008013A	GSP2-2	12.5	Toluene	160	U		PPBV	10/23/2003
4SG008013A	GSP2-2	12.5	trans-1,2-Dichloroethene	160	U		PPBV	10/23/2003
4SG008013A	GSP2-2	12.5	trans-1,3-Dichloropropene	160	U		PPBV	10/23/2003
4SG008013A	GSP2-2	12.5	Trichloroethene	160	D		PPBV	10/23/2003
4SG008013A	GSP2-2	12.5	Trichlorofluoromethane	230	D	U	PPBV	10/23/2003
4SG008013A	GSP2-2	12.5	UNKNOWN	230	JD	J	PPBV	10/23/2003
4SG008013A	GSP2-2	12.5	Vinyl Chloride	160	U		PPBV	10/23/2003
4SG009013A	GSP2-2	37.5	1,1,1-Trichloroethane	960	D		PPBV	10/23/2003
4SG009013A	GSP2-2	37.5	1,1,2,2-Tetrachloroethane	16	U		PPBV	10/23/2003
4SG009013A	GSP2-2	37.5	1,1,2-Trichloroethane	16	U		PPBV	10/23/2003
4SG009013A	GSP2-2	37.5	1,1-Dichloroethane	2500	D		PPBV	10/23/2003
4SG009013A	GSP2-2	37.5	1,1-Dichloroethene	76			PPBV	10/23/2003
4SG009013A	GSP2-2	37.5	1,2,4-Trichlorobenzene	16	U		PPBV	10/23/2003
4SG009013A	GSP2-2	37.5	1,2,4-Trimethylbenzene	16	U		PPBV	10/23/2003
4SG009013A	GSP2-2	37.5	1,2-Dibromoethane	16	U		PPBV	10/23/2003
4SG009013A	GSP2-2	37.5	1,2-Dichlorobenzene	16	U		PPBV	10/23/2003
4SG009013A	GSP2-2	37.5	1,2-Dichloroethane	16	U		PPBV	10/23/2003
4SG009013A	GSP2-2	37.5	1,2-Dichloropropane	46			PPBV	10/23/2003
4SG009013A	GSP2-2	37.5	1,3,5-Trimethylbenzene	16	U		PPBV	10/23/2003
4SG009013A	GSP2-2	37.5	1,3-Dichlorobenzene	16	U		PPBV	10/23/2003
4SG009013A	GSP2-2	37.5	1,4-Dichlorobenzene	16	U		PPBV	10/23/2003
4SG009013A	GSP2-2	37.5	1-Propene, 2-methyl-	33	JN	NJ	PPBV	10/23/2003
4SG009013A	GSP2-2	37.5	2-Butanone	16	U		PPBV	10/23/2003
4SG009013A	GSP2-2	37.5	2-Hexanone	16	U		PPBV	10/23/2003
4SG009013A	GSP2-2	37.5	2-Pentene, 3-methyl-, (E)-	27	JN	NJ	PPBV	10/23/2003
4SG009013A	GSP2-2	37.5	4-Ethyltoluene	16	U		PPBV	10/23/2003
4SG009013A	GSP2-2	37.5	4-Methyl-2-pentanone	16	U		PPBV	10/23/2003
4SG009013A	GSP2-2	37.5	Acetone	16	U		PPBV	10/23/2003
4SG009013A	GSP2-2	37.5	Benzene	16	U		PPBV	10/23/2003
4SG009013A	GSP2-2	37.5	Benzyl chloride	16	U		PPBV	10/23/2003
4SG009013A	GSP2-2	37.5	Bromomethane	16	U		PPBV	10/23/2003
4SG009013A	GSP2-2	37.5	Carbon disulfide	16	U		PPBV	10/23/2003
4SG009013A	GSP2-2	37.5	Carbon tetrachloride	7	J	J	PPBV	10/23/2003
4SG009013A	GSP2-2	37.5	Chlorobenzene	35			PPBV	10/23/2003
4SG009013A	GSP2-2	37.5	Chloroethane	16	U		PPBV	10/23/2003
4SG009013A	GSP2-2	37.5	Chloroform	25			PPBV	10/23/2003
4SG009013A	GSP2-2	37.5	Chloromethane	16	U		PPBV	10/23/2003
4SG009013A	GSP2-2	37.5	cis-1,2-Dichloroethene	1300	D		PPBV	10/23/2003
4SG009013A	GSP2-2	37.5	cis-1,3-Dichloropropene	16	U		PPBV	10/23/2003
4SG009013A	GSP2-2	37.5	Dichlorodifluoromethane	1100	E	J	PPBV	10/23/2003
4SG009013A	GSP2-2	37.5	Ethane, 1,2-dichloro-1,1,2-trifluor	110	JN	NJ	PPBV	10/23/2003
4SG009013A	GSP2-2	37.5	Ethylbenzene	16	U		PPBV	10/23/2003
4SG009013A	GSP2-2	37.5	Freon 113	230			PPBV	10/23/2003
4SG009013A	GSP2-2	37.5	Freon 114	20	J	J	PPBV	10/23/2003
4SG009013A	GSP2-2	37.5	Hexachlorobutadiene	16	U		PPBV	10/23/2003
4SG009013A	GSP2-2	37.5	m,p-Xylenes	16	U		PPBV	10/23/2003
4SG009013A	GSP2-2	37.5	Methane, dichlorofluoro-	200	JN	NJ	PPBV	10/23/2003
4SG009013A	GSP2-2	37.5	Methylene Chloride	24	U		PPBV	10/23/2003
4SG009013A	GSP2-2	37.5	o-Xylene	16	U		PPBV	10/23/2003
4SG009013A	GSP2-2	37.5	Phenol	21	JN	NJ	PPBV	10/23/2003
4SG009013A	GSP2-2	37.5	Styrene	16	U		PPBV	10/23/2003
4SG009013A	GSP2-2	37.5	Tetrachloroethene	600			PPBV	10/23/2003
4SG009013A	GSP2-2	37.5	Toluene	16	U		PPBV	10/23/2003
4SG009013A	GSP2-2	37.5	trans-1,2-Dichloroethene	16	U		PPBV	10/23/2003
4SG009013A	GSP2-2	37.5	trans-1,3-Dichloropropene	16	U		PPBV	10/23/2003
4SG009013A	GSP2-2	37.5	Trichloroethene	360			PPBV	10/23/2003
4SG009013A	GSP2-2	37.5	Trichlorofluoromethane	790			PPBV	10/23/2003

Field Sample Number	Location	Depth	Compound	Sample Result	Result Qualifier	Validation Flag	Sample Units	Date Sample Collected
4SG009013A	GSP2-2	37.5	UNKNOWN	160	J	J	PPBV	10/23/2003
4SG009013A	GSP2-2	37.5	UNKNOWN	37	J	J	PPBV	10/23/2003
4SG009013A	GSP2-2	37.5	UNKNOWN	33	J	J	PPBV	10/23/2003
4SG009013A	GSP2-2	37.5	Vinyl Chloride	16	U		PPBV	10/23/2003
4SG010013A	GSP2-2	77.5	1,1,1-Trichloroethane	800	D		PPBV	10/23/2003
4SG010013A	GSP2-2	77.5	1,1,2,2-Tetrachloroethane	16	U		PPBV	10/23/2003
4SG010013A	GSP2-2	77.5	1,1,2-Trichloroethane	16	U		PPBV	10/23/2003
4SG010013A	GSP2-2	77.5	1,1-Dichloroethane	970	D		PPBV	10/23/2003
4SG010013A	GSP2-2	77.5	1,1-Dichloroethene	75			PPBV	10/23/2003
4SG010013A	GSP2-2	77.5	1,2,4-Trichlorobenzene	16	U		PPBV	10/23/2003
4SG010013A	GSP2-2	77.5	1,2,4-Trimethylbenzene	16	U		PPBV	10/23/2003
4SG010013A	GSP2-2	77.5	1,2-Dibromoethane	16	U		PPBV	10/23/2003
4SG010013A	GSP2-2	77.5	1,2-Dichlorobenzene	16	U		PPBV	10/23/2003
4SG010013A	GSP2-2	77.5	1,2-Dichloroethane	16	U		PPBV	10/23/2003
4SG010013A	GSP2-2	77.5	1,2-Dichloropropane	16	U		PPBV	10/23/2003
4SG010013A	GSP2-2	77.5	1,3,5-Trimethylbenzene	16	U		PPBV	10/23/2003
4SG010013A	GSP2-2	77.5	1,3-Dichlorobenzene	16	U		PPBV	10/23/2003
4SG010013A	GSP2-2	77.5	1,4-Dichlorobenzene	16	U		PPBV	10/23/2003
4SG010013A	GSP2-2	77.5	2-Butanone	16	U		PPBV	10/23/2003
4SG010013A	GSP2-2	77.5	2-Hexanone	16	U		PPBV	10/23/2003
4SG010013A	GSP2-2	77.5	4-Ethyltoluene	16	U		PPBV	10/23/2003
4SG010013A	GSP2-2	77.5	4-Methyl-2-pentanone	16	U		PPBV	10/23/2003
4SG010013A	GSP2-2	77.5	Acetone	16	U		PPBV	10/23/2003
4SG010013A	GSP2-2	77.5	Benzene	16	U		PPBV	10/23/2003
4SG010013A	GSP2-2	77.5	Benzyl chloride	16	U		PPBV	10/23/2003
4SG010013A	GSP2-2	77.5	Bromomethane	16	U		PPBV	10/23/2003
4SG010013A	GSP2-2	77.5	Carbon disulfide	16	U		PPBV	10/23/2003
4SG010013A	GSP2-2	77.5	Carbon tetrachloride	27			PPBV	10/23/2003
4SG010013A	GSP2-2	77.5	Chlorobenzene	16	U		PPBV	10/23/2003
4SG010013A	GSP2-2	77.5	Chloroethane	16	U		PPBV	10/23/2003
4SG010013A	GSP2-2	77.5	Chloroform	15	J	J	PPBV	10/23/2003
4SG010013A	GSP2-2	77.5	Chloromethane	16	U		PPBV	10/23/2003
4SG010013A	GSP2-2	77.5	cis-1,2-Dichloroethene	410			PPBV	10/23/2003
4SG010013A	GSP2-2	77.5	cis-1,3-Dichloropropene	16	U		PPBV	10/23/2003
4SG010013A	GSP2-2	77.5	Dichlorodifluoromethane	1100	D		PPBV	10/23/2003
4SG010013A	GSP2-2	77.5	Ethane, 1,2-dichloro-1,1,2-trifluor-	100	JN	NJ	PPBV	10/23/2003
4SG010013A	GSP2-2	77.5	Ethane, 1-chloro-1,1-difluoro-	110	JN	NJ	PPBV	10/23/2003
4SG010013A	GSP2-2	77.5	Ethylbenzene	16	U		PPBV	10/23/2003
4SG010013A	GSP2-2	77.5	Freon 113	260			PPBV	10/23/2003
4SG010013A	GSP2-2	77.5	Freon 114	32	U		PPBV	10/23/2003
4SG010013A	GSP2-2	77.5	Hexachlorobutadiene	16	U		PPBV	10/23/2003
4SG010013A	GSP2-2	77.5	Isobutane	510	JN	NJ	PPBV	10/23/2003
4SG010013A	GSP2-2	77.5	m,p-Xylenes	16	U		PPBV	10/23/2003
4SG010013A	GSP2-2	77.5	Methane, dichlorofluoro-	290	JN	NJ	PPBV	10/23/2003
4SG010013A	GSP2-2	77.5	Methylene Chloride	16	U		PPBV	10/23/2003
4SG010013A	GSP2-2	77.5	o-Xylene	16	U		PPBV	10/23/2003
4SG010013A	GSP2-2	77.5	Phenol	20	JN	NJ	PPBV	10/23/2003
4SG010013A	GSP2-2	77.5	Styrene	16	U		PPBV	10/23/2003
4SG010013A	GSP2-2	77.5	Tetrachloroethene	380			PPBV	10/23/2003
4SG010013A	GSP2-2	77.5	Toluene	16	U		PPBV	10/23/2003
4SG010013A	GSP2-2	77.5	trans-1,2-Dichloroethene	16	U		PPBV	10/23/2003
4SG010013A	GSP2-2	77.5	trans-1,3-Dichloropropene	16	U		PPBV	10/23/2003
4SG010013A	GSP2-2	77.5	Trichloroethene	180			PPBV	10/23/2003
4SG010013A	GSP2-2	77.5	Trichlorofluoromethane	1800	D		PPBV	10/23/2003
4SG010013A	GSP2-2	77.5	UNKNOWN	55	J	J	PPBV	10/23/2003
4SG010013A	GSP2-2	77.5	UNKNOWN	40	J	J	PPBV	10/23/2003
4SG010013A	GSP2-2	77.5	UNKNOWN	60	J	J	PPBV	10/23/2003
4SG010013A	GSP2-2	77.5	UNKNOWN	130	J	J	PPBV	10/23/2003
4SG010013A	GSP2-2	77.5	Vinyl Chloride	16	U		PPBV	10/23/2003
4SG011013A	GSP2-2	107.5	1,1,1-Trichloroethane	950	D		PPBV	10/23/2003
4SG011013A	GSP2-2	107.5	1,1,2,2-Tetrachloroethane	16	U		PPBV	10/23/2003
4SG011013A	GSP2-2	107.5	1,1,2-Trichloroethane	16	U		PPBV	10/23/2003
4SG011013A	GSP2-2	107.5	1,1-Dichloroethane	920	D		PPBV	10/23/2003
4SG011013A	GSP2-2	107.5	1,1-Dichloroethene	100			PPBV	10/23/2003
4SG011013A	GSP2-2	107.5	1,2,4-Trichlorobenzene	16	U		PPBV	10/23/2003
4SG011013A	GSP2-2	107.5	1,2,4-Trimethylbenzene	16	U		PPBV	10/23/2003
4SG011013A	GSP2-2	107.5	1,2-Dibromoethane	16	U		PPBV	10/23/2003
4SG011013A	GSP2-2	107.5	1,2-Dichlorobenzene	16	U		PPBV	10/23/2003
4SG011013A	GSP2-2	107.5	1,2-Dichloroethane	16	U		PPBV	10/23/2003
4SG011013A	GSP2-2	107.5	1,2-Dichloropropane	16	U		PPBV	10/23/2003
4SG011013A	GSP2-2	107.5	1,3,5-Trimethylbenzene	16	U		PPBV	10/23/2003

Field Sample Number	Location	Depth	Compound	Sample Result	Result Qualifier	Validation Flag	Sample Units	Date Sample Collected
4SG011013A	GSP2-2	107.5	1,3-Dichlorobenzene	16	U		PPBV	10/23/2003
4SG011013A	GSP2-2	107.5	1,4-Dichlorobenzene	16	U		PPBV	10/23/2003
4SG011013A	GSP2-2	107.5	2-Butanone	16	U		PPBV	10/23/2003
4SG011013A	GSP2-2	107.5	2-Hexanone	16	U		PPBV	10/23/2003
4SG011013A	GSP2-2	107.5	4-Ethyltoluene	16	U		PPBV	10/23/2003
4SG011013A	GSP2-2	107.5	4-Methyl-2-pentanone	16	U		PPBV	10/23/2003
4SG011013A	GSP2-2	107.5	Acetone	16	U		PPBV	10/23/2003
4SG011013A	GSP2-2	107.5	Benzene	16	U		PPBV	10/23/2003
4SG011013A	GSP2-2	107.5	Benzyl chloride	16	U		PPBV	10/23/2003
4SG011013A	GSP2-2	107.5	Bromomethane	16	U		PPBV	10/23/2003
4SG011013A	GSP2-2	107.5	Carbon disulfide	16	U		PPBV	10/23/2003
4SG011013A	GSP2-2	107.5	Carbon tetrachloride	39			PPBV	10/23/2003
4SG011013A	GSP2-2	107.5	Chlorobenzene	16	U		PPBV	10/23/2003
4SG011013A	GSP2-2	107.5	Chloroethane	16	U		PPBV	10/23/2003
4SG011013A	GSP2-2	107.5	Chloroform	17			PPBV	10/23/2003
4SG011013A	GSP2-2	107.5	Chloromethane	16	U		PPBV	10/23/2003
4SG011013A	GSP2-2	107.5	cis-1,2-Dichloroethene	270			PPBV	10/23/2003
4SG011013A	GSP2-2	107.5	cis-1,3-Dichloropropene	16	U		PPBV	10/23/2003
4SG011013A	GSP2-2	107.5	Dichlorodifluoromethane	16	U		PPBV	10/23/2003
4SG011013A	GSP2-2	107.5	Ethylbenzene	16	U		PPBV	10/23/2003
4SG011013A	GSP2-2	107.5	Freon 113	310			PPBV	10/23/2003
4SG011013A	GSP2-2	107.5	Freon 114	31	U		PPBV	10/23/2003
4SG011013A	GSP2-2	107.5	Hexachlorobutadiene	16	U		PPBV	10/23/2003
4SG011013A	GSP2-2	107.5	m,p-Xylenes	16	U		PPBV	10/23/2003
4SG011013A	GSP2-2	107.5	Methane, dichlorofluoro-	190	JN	NJ	PPBV	10/23/2003
4SG011013A	GSP2-2	107.5	Methylene Chloride	16	U		PPBV	10/23/2003
4SG011013A	GSP2-2	107.5	o-Xylene	16	U		PPBV	10/23/2003
4SG011013A	GSP2-2	107.5	Phenol	25	JN	NJ	PPBV	10/23/2003
4SG011013A	GSP2-2	107.5	Styrene	16	U		PPBV	10/23/2003
4SG011013A	GSP2-2	107.5	Tetrachloroethene	390			PPBV	10/23/2003
4SG011013A	GSP2-2	107.5	Toluene	16	U		PPBV	10/23/2003
4SG011013A	GSP2-2	107.5	trans-1,2-Dichloroethene	16	U		PPBV	10/23/2003
4SG011013A	GSP2-2	107.5	trans-1,3-Dichloropropene	16	U		PPBV	10/23/2003
4SG011013A	GSP2-2	107.5	Trichloroethene	210			PPBV	10/23/2003
4SG011013A	GSP2-2	107.5	Trichlorofluoromethane	1800	D		PPBV	10/23/2003
4SG011013A	GSP2-2	107.5	UNKNOWN	83	J	J	PPBV	10/23/2003
4SG011013A	GSP2-2	107.5	UNKNOWN	98	J	J	PPBV	10/23/2003
4SG011013A	GSP2-2	107.5	UNKNOWN	120	J	J	PPBV	10/23/2003
4SG011013A	GSP2-2	107.5	Vinyl Chloride	16	U		PPBV	10/23/2003
4SG011013A	GSP2-2	107.5	Methane	0.76	U	U	PERCENT	10/23/2003
4SG008013A	GSP2-2	12.5	Methane	0.76	U	U	PERCENT	10/23/2003
4SG009013A	GSP2-2	37.5	Methane	0.76	U	U	PERCENT	10/23/2003
4SG010013A	GSP2-2	77.5	Methane	0.76	U	U	PERCENT	10/23/2003
4SG012013A	GSP3-1	12.5	1,1,1-Trichloroethane	1400	D		PPBV	10/23/2003
4SG012013A	GSP3-1	12.5	1,1,2,2-Tetrachloroethane	16	U		PPBV	10/23/2003
4SG012013A	GSP3-1	12.5	1,1,2-Trichloroethane	16	U		PPBV	10/23/2003
4SG012013A	GSP3-1	12.5	1,1-Dichloroethane	200			PPBV	10/23/2003
4SG012013A	GSP3-1	12.5	1,1-Dichloroethene	500			PPBV	10/23/2003
4SG012013A	GSP3-1	12.5	1,2,4-Trichlorobenzene	16	U		PPBV	10/23/2003
4SG012013A	GSP3-1	12.5	1,2,4-Trimethylbenzene	16	U		PPBV	10/23/2003
4SG012013A	GSP3-1	12.5	1,2-Dibromoethane	16	U		PPBV	10/23/2003
4SG012013A	GSP3-1	12.5	1,2-Dichlorobenzene	16	U		PPBV	10/23/2003
4SG012013A	GSP3-1	12.5	1,2-Dichloroethane	16	U		PPBV	10/23/2003
4SG012013A	GSP3-1	12.5	1,2-Dichloropropane	16	U		PPBV	10/23/2003
4SG012013A	GSP3-1	12.5	1,3,5-Trimethylbenzene	16	U		PPBV	10/23/2003
4SG012013A	GSP3-1	12.5	1,3-Dichlorobenzene	16	U		PPBV	10/23/2003
4SG012013A	GSP3-1	12.5	1,4-Dichlorobenzene	16	U		PPBV	10/23/2003
4SG012013A	GSP3-1	12.5	2-Butanone	16	U		PPBV	10/23/2003
4SG012013A	GSP3-1	12.5	2-Hexanone	16	U		PPBV	10/23/2003
4SG012013A	GSP3-1	12.5	4-Ethyltoluene	16	U		PPBV	10/23/2003
4SG012013A	GSP3-1	12.5	4-Methyl-2-pentanone	16	U		PPBV	10/23/2003
4SG012013A	GSP3-1	12.5	Acetone	16	U		PPBV	10/23/2003
4SG012013A	GSP3-1	12.5	Benzene	16	U		PPBV	10/23/2003
4SG012013A	GSP3-1	12.5	Benzyl chloride	16	U		PPBV	10/23/2003
4SG012013A	GSP3-1	12.5	Bromomethane	16	U		PPBV	10/23/2003
4SG012013A	GSP3-1	12.5	Carbon disulfide	16	U		PPBV	10/23/2003
4SG012013A	GSP3-1	12.5	Carbon tetrachloride	16	U		PPBV	10/23/2003
4SG012013A	GSP3-1	12.5	Chlorobenzene	16	U		PPBV	10/23/2003
4SG012013A	GSP3-1	12.5	Chloroethane	16	U		PPBV	10/23/2003
4SG012013A	GSP3-1	12.5	Chloroform	10	J	J	PPBV	10/23/2003
4SG012013A	GSP3-1	12.5	Chloromethane	16	U		PPBV	10/23/2003

Field Sample Number	Location	Depth	Compound	Sample Result	Result Qualifier	Validation Flag	Sample Units	Date Sample Collected
4SG012013A	GSP3-1	12.5	cis-1,2-Dichloroethene	16	U		PPBV	10/23/2003
4SG012013A	GSP3-1	12.5	cis-1,3-Dichloropropene	16	U		PPBV	10/23/2003
4SG012013A	GSP3-1	12.5	Dichlorodifluoromethane	410			PPBV	10/23/2003
4SG012013A	GSP3-1	12.5	Ethane, 1,2-dichloro-1,1,2-trifluor	58	JN	NJ	PPBV	10/23/2003
4SG012013A	GSP3-1	12.5	Ethylbenzene	16	U		PPBV	10/23/2003
4SG012013A	GSP3-1	12.5	Freon 113	240			PPBV	10/23/2003
4SG012013A	GSP3-1	12.5	Freon 114	32	U		PPBV	10/23/2003
4SG012013A	GSP3-1	12.5	Hexachlorobutadiene	16	U		PPBV	10/23/2003
4SG012013A	GSP3-1	12.5	Isobutane	98	JN	NJ	PPBV	10/23/2003
4SG012013A	GSP3-1	12.5	m,p-Xylenes	16	U		PPBV	10/23/2003
4SG012013A	GSP3-1	12.5	Methane, dichlorofluoro-	140	JN	NJ	PPBV	10/23/2003
4SG012013A	GSP3-1	12.5	Methylene Chloride	16	U		PPBV	10/23/2003
4SG012013A	GSP3-1	12.5	o-Xylene	16	U		PPBV	10/23/2003
4SG012013A	GSP3-1	12.5	Phenol	19	JN	NJ	PPBV	10/23/2003
4SG012013A	GSP3-1	12.5	Styrene	16	U		PPBV	10/23/2003
4SG012013A	GSP3-1	12.5	Tetrachloroethene	31			PPBV	10/23/2003
4SG012013A	GSP3-1	12.5	Toluene	16	U		PPBV	10/23/2003
4SG012013A	GSP3-1	12.5	trans-1,2-Dichloroethene	16	U		PPBV	10/23/2003
4SG012013A	GSP3-1	12.5	trans-1,3-Dichloropropene	16	U		PPBV	10/23/2003
4SG012013A	GSP3-1	12.5	Trichloroethene	75			PPBV	10/23/2003
4SG012013A	GSP3-1	12.5	Trichlorofluoromethane	300			PPBV	10/23/2003
4SG012013A	GSP3-1	12.5	Vinyl Chloride	16	U		PPBV	10/23/2003
4SG013013A	GSP3-1	37.5	1,1,1-Trichloroethane	4900	D		PPBV	10/23/2003
4SG013013A	GSP3-1	37.5	1,1,2,2-Tetrachloroethane	17	U		PPBV	10/23/2003
4SG013013A	GSP3-1	37.5	1,1,2-Trichloroethane	17	U		PPBV	10/23/2003
4SG013013A	GSP3-1	37.5	1,1-Dichloroethane	750			PPBV	10/23/2003
4SG013013A	GSP3-1	37.5	1,1-Dichloroethene	1600	DJ	J	PPBV	10/23/2003
4SG013013A	GSP3-1	37.5	1,2,4-Trichlorobenzene	17	U		PPBV	10/23/2003
4SG013013A	GSP3-1	37.5	1,2,4-Trimethylbenzene	17	U		PPBV	10/23/2003
4SG013013A	GSP3-1	37.5	1,2-Dibromoethane	17	U		PPBV	10/23/2003
4SG013013A	GSP3-1	37.5	1,2-Dichlorobenzene	17	U		PPBV	10/23/2003
4SG013013A	GSP3-1	37.5	1,2-Dichloroethane	17	U		PPBV	10/23/2003
4SG013013A	GSP3-1	37.5	1,2-Dichloropropane	17	U		PPBV	10/23/2003
4SG013013A	GSP3-1	37.5	1,3,5-Trimethylbenzene	17	U		PPBV	10/23/2003
4SG013013A	GSP3-1	37.5	1,3-Dichlorobenzene	17	U		PPBV	10/23/2003
4SG013013A	GSP3-1	37.5	1,4-Dichlorobenzene	17	U		PPBV	10/23/2003
4SG013013A	GSP3-1	37.5	2-Butanone	17	U		PPBV	10/23/2003
4SG013013A	GSP3-1	37.5	2-Hexanone	17	U		PPBV	10/23/2003
4SG013013A	GSP3-1	37.5	4-Ethyltoluene	17	U		PPBV	10/23/2003
4SG013013A	GSP3-1	37.5	4-Methyl-2-pentanone	17	U		PPBV	10/23/2003
4SG013013A	GSP3-1	37.5	Acetone	17	U		PPBV	10/23/2003
4SG013013A	GSP3-1	37.5	Benzene	17	U		PPBV	10/23/2003
4SG013013A	GSP3-1	37.5	Benzyl chloride	17	U		PPBV	10/23/2003
4SG013013A	GSP3-1	37.5	Bromomethane	17	U		PPBV	10/23/2003
4SG013013A	GSP3-1	37.5	Carbon disulfide	17	U		PPBV	10/23/2003
4SG013013A	GSP3-1	37.5	Carbon tetrachloride	8	J	J	PPBV	10/23/2003
4SG013013A	GSP3-1	37.5	Chlorobenzene	17	U		PPBV	10/23/2003
4SG013013A	GSP3-1	37.5	Chloroethane	17	U		PPBV	10/23/2003
4SG013013A	GSP3-1	37.5	Chloroform	39			PPBV	10/23/2003
4SG013013A	GSP3-1	37.5	Chloromethane	17	U		PPBV	10/23/2003
4SG013013A	GSP3-1	37.5	cis-1,2-Dichloroethene	43			PPBV	10/23/2003
4SG013013A	GSP3-1	37.5	cis-1,3-Dichloropropene	17	U		PPBV	10/23/2003
4SG013013A	GSP3-1	37.5	Dichlorodifluoromethane	1900	D		PPBV	10/23/2003
4SG013013A	GSP3-1	37.5	Ethane, 1,2-dichloro-1,1,2-trifluor	170	JN	NJ	PPBV	10/23/2003
4SG013013A	GSP3-1	37.5	Ethylbenzene	17	U		PPBV	10/23/2003
4SG013013A	GSP3-1	37.5	Freon 113	830			PPBV	10/23/2003
4SG013013A	GSP3-1	37.5	Freon 114	28	J	J	PPBV	10/23/2003
4SG013013A	GSP3-1	37.5	Hexachlorobutadiene	17	U		PPBV	10/23/2003
4SG013013A	GSP3-1	37.5	m,p-Xylenes	17	U		PPBV	10/23/2003
4SG013013A	GSP3-1	37.5	Methane, dichlorofluoro-	510	JN	NJ	PPBV	10/23/2003
4SG013013A	GSP3-1	37.5	Methylene Chloride	40	U		PPBV	10/23/2003
4SG013013A	GSP3-1	37.5	o-Xylene	17	U		PPBV	10/23/2003
4SG013013A	GSP3-1	37.5	Phenol	18	JN	NJ	PPBV	10/23/2003
4SG013013A	GSP3-1	37.5	Styrene	17	U		PPBV	10/23/2003
4SG013013A	GSP3-1	37.5	Tetrachloroethene	430			PPBV	10/23/2003
4SG013013A	GSP3-1	37.5	Toluene	17	U		PPBV	10/23/2003
4SG013013A	GSP3-1	37.5	trans-1,2-Dichloroethene	17	U		PPBV	10/23/2003
4SG013013A	GSP3-1	37.5	trans-1,3-Dichloropropene	17	U		PPBV	10/23/2003
4SG013013A	GSP3-1	37.5	Trichloroethene	440			PPBV	10/23/2003
4SG013013A	GSP3-1	37.5	Trichlorofluoromethane	1400	DJ	J	PPBV	10/23/2003
4SG013013A	GSP3-1	37.5	UNKNOWN	19	J	J	PPBV	10/23/2003

Field Sample Number	Location	Depth	Compound	Sample Result	Result Qualifier	Validation Flag	Sample Units	Date Sample Collected
4SG013013A	GSP3-1	37.5	UNKNOWN	36	J	J	PPBV	10/23/2003
4SG013013A	GSP3-1	37.5	UNKNOWN	27	J	J	PPBV	10/23/2003
4SG013013A	GSP3-1	37.5	UNKNOWN	35	J	J	PPBV	10/23/2003
4SG013013A	GSP3-1	37.5	Vinyl Chloride	17	U		PPBV	10/23/2003
4SG014013A	GSP3-1	77.5	1,1,1-Trichloroethane	13000	D		PPBV	10/23/2003
4SG014013A	GSP3-1	77.5	1,1,2,2-Tetrachloroethane	14	U		PPBV	10/23/2003
4SG014013A	GSP3-1	77.5	1,1,2-Trichloroethane	14	U		PPBV	10/23/2003
4SG014013A	GSP3-1	77.5	1,1-Dichloroethane	290			PPBV	10/23/2003
4SG014013A	GSP3-1	77.5	1,1-Dichloroethene	5800	D		PPBV	10/23/2003
4SG014013A	GSP3-1	77.5	1,2,4-Trichlorobenzene	14	U		PPBV	10/23/2003
4SG014013A	GSP3-1	77.5	1,2,4-Trimethylbenzene	14	U		PPBV	10/23/2003
4SG014013A	GSP3-1	77.5	1,2-Dibromoethane	14	U		PPBV	10/23/2003
4SG014013A	GSP3-1	77.5	1,2-Dichlorobenzene	14	U		PPBV	10/23/2003
4SG014013A	GSP3-1	77.5	1,2-Dichloroethane	14	U		PPBV	10/23/2003
4SG014013A	GSP3-1	77.5	1,2-Dichloropropane	14	U		PPBV	10/23/2003
4SG014013A	GSP3-1	77.5	1,3,5-Trimethylbenzene	14	U		PPBV	10/23/2003
4SG014013A	GSP3-1	77.5	1,3-Dichlorobenzene	14	U		PPBV	10/23/2003
4SG014013A	GSP3-1	77.5	1,4-Dichlorobenzene	14	U		PPBV	10/23/2003
4SG014013A	GSP3-1	77.5	1-Hexene	16	JN	NJ	PPBV	10/23/2003
4SG014013A	GSP3-1	77.5	2-Butanone	14	U		PPBV	10/23/2003
4SG014013A	GSP3-1	77.5	2-Hexanone	14	U		PPBV	10/23/2003
4SG014013A	GSP3-1	77.5	4-Ethyltoluene	14	U		PPBV	10/23/2003
4SG014013A	GSP3-1	77.5	4-Methyl-2-pentanone	14	U		PPBV	10/23/2003
4SG014013A	GSP3-1	77.5	Acetone	14	U		PPBV	10/23/2003
4SG014013A	GSP3-1	77.5	Benzene	14	U		PPBV	10/23/2003
4SG014013A	GSP3-1	77.5	Benzyl chloride	14	U		PPBV	10/23/2003
4SG014013A	GSP3-1	77.5	Bromomethane	14	U		PPBV	10/23/2003
4SG014013A	GSP3-1	77.5	Butane	77	JN	NJ	PPBV	10/23/2003
4SG014013A	GSP3-1	77.5	Carbon disulfide	14	U		PPBV	10/23/2003
4SG014013A	GSP3-1	77.5	Carbon tetrachloride	14			PPBV	10/23/2003
4SG014013A	GSP3-1	77.5	Chlorobenzene	14	U		PPBV	10/23/2003
4SG014013A	GSP3-1	77.5	Chloroethane	14	U		PPBV	10/23/2003
4SG014013A	GSP3-1	77.5	Chloroform	36			PPBV	10/23/2003
4SG014013A	GSP3-1	77.5	Chloromethane	14	U		PPBV	10/23/2003
4SG014013A	GSP3-1	77.5	cis-1,2-Dichloroethene	14	U		PPBV	10/23/2003
4SG014013A	GSP3-1	77.5	cis-1,3-Dichloropropene	14	U		PPBV	10/23/2003
4SG014013A	GSP3-1	77.5	Decane	33	JN	NJ	PPBV	10/23/2003
4SG014013A	GSP3-1	77.5	Dichlorodifluoromethane	980	DJ	J	PPBV	10/23/2003
4SG014013A	GSP3-1	77.5	Dodecane	38	JN	NJ	PPBV	10/23/2003
4SG014013A	GSP3-1	77.5	Ethane, 1,2-dichloro-1,1,2-trifluor	92	JN	NJ	PPBV	10/23/2003
4SG014013A	GSP3-1	77.5	Ethylbenzene	14	U		PPBV	10/23/2003
4SG014013A	GSP3-1	77.5	Freon 113	680			PPBV	10/23/2003
4SG014013A	GSP3-1	77.5	Freon 114	32			PPBV	10/23/2003
4SG014013A	GSP3-1	77.5	Hexachlorobutadiene	14	U		PPBV	10/23/2003
4SG014013A	GSP3-1	77.5	m,p-Xylenes	14	U		PPBV	10/23/2003
4SG014013A	GSP3-1	77.5	Methylene Chloride	52	U		PPBV	10/23/2003
4SG014013A	GSP3-1	77.5	o-Xylene	14	U		PPBV	10/23/2003
4SG014013A	GSP3-1	77.5	Pentane, 2-methyl-	15	JN	NJ	PPBV	10/23/2003
4SG014013A	GSP3-1	77.5	Phenol	21	JN	NJ	PPBV	10/23/2003
4SG014013A	GSP3-1	77.5	Phenol, 2,6-bis(1,1-dimethylethyl)-	23	J	J	PPBV	10/23/2003
4SG014013A	GSP3-1	77.5	Styrene	14	U		PPBV	10/23/2003
4SG014013A	GSP3-1	77.5	Tetrachloroethene	24			PPBV	10/23/2003
4SG014013A	GSP3-1	77.5	Toluene	14	U		PPBV	10/23/2003
4SG014013A	GSP3-1	77.5	trans-1,2-Dichloroethene	14	U		PPBV	10/23/2003
4SG014013A	GSP3-1	77.5	trans-1,3-Dichloropropene	14	U		PPBV	10/23/2003
4SG014013A	GSP3-1	77.5	Trichloroethene	130			PPBV	10/23/2003
4SG014013A	GSP3-1	77.5	Trichlorofluoromethane	1400	D		PPBV	10/23/2003
4SG014013A	GSP3-1	77.5	Undecane	89	JN	NJ	PPBV	10/23/2003
4SG014013A	GSP3-1	77.5	UNKNOWN	56	J	J	PPBV	10/23/2003
4SG014013A	GSP3-1	77.5	UNKNOWN	19	J	J	PPBV	10/23/2003
4SG014013A	GSP3-1	77.5	Vinyl Chloride	14	U		PPBV	10/23/2003
4SG015013A	GSP3-1	107.5	1,1,1-Trichloroethane	2700	D		PPBV	10/23/2003
4SG015013A	GSP3-1	107.5	1,1,2,2-Tetrachloroethane	16	U		PPBV	10/23/2003
4SG015013A	GSP3-1	107.5	1,1,2-Trichloroethane	16	U		PPBV	10/23/2003
4SG015013A	GSP3-1	107.5	1,1-Dichloroethane	29			PPBV	10/23/2003
4SG015013A	GSP3-1	107.5	1,1-Dichloroethene	1200	D		PPBV	10/23/2003
4SG015013A	GSP3-1	107.5	1,2,4-Trichlorobenzene	16	U		PPBV	10/23/2003
4SG015013A	GSP3-1	107.5	1,2,4-Trimethylbenzene	16	U		PPBV	10/23/2003
4SG015013A	GSP3-1	107.5	1,2-Dibromoethane	16	U		PPBV	10/23/2003
4SG015013A	GSP3-1	107.5	1,2-Dichlorobenzene	16	U		PPBV	10/23/2003
4SG015013A	GSP3-1	107.5	1,2-Dichloroethane	16	U		PPBV	10/23/2003

Field Sample Number	Location	Depth	Compound	Sample Result	Result Qualifier	Validation Flag	Sample Units	Date Sample Collected
4SG015013A	GSP3-1	107.5	1,2-Dichloropropane	16	U		PPBV	10/23/2003
4SG015013A	GSP3-1	107.5	1,3,5-Trimethylbenzene	16	U		PPBV	10/23/2003
4SG015013A	GSP3-1	107.5	1,3-Dichlorobenzene	16	U		PPBV	10/23/2003
4SG015013A	GSP3-1	107.5	1,4-Dichlorobenzene	16	U		PPBV	10/23/2003
4SG015013A	GSP3-1	107.5	2-Butanone	16	U		PPBV	10/23/2003
4SG015013A	GSP3-1	107.5	2-Hexanone	16	U		PPBV	10/23/2003
4SG015013A	GSP3-1	107.5	4-Ethyltoluene	16	U		PPBV	10/23/2003
4SG015013A	GSP3-1	107.5	4-Methyl-2-pentanone	16	U		PPBV	10/23/2003
4SG015013A	GSP3-1	107.5	Acetone	16	U		PPBV	10/23/2003
4SG015013A	GSP3-1	107.5	Benzene	16	U		PPBV	10/23/2003
4SG015013A	GSP3-1	107.5	Benzyl chloride	16	U		PPBV	10/23/2003
4SG015013A	GSP3-1	107.5	Bromomethane	16	U		PPBV	10/23/2003
4SG015013A	GSP3-1	107.5	Butane	29	JN	NJ	PPBV	10/23/2003
4SG015013A	GSP3-1	107.5	Carbon disulfide	16	U		PPBV	10/23/2003
4SG015013A	GSP3-1	107.5	Carbon tetrachloride	16	U		PPBV	10/23/2003
4SG015013A	GSP3-1	107.5	Chlorobenzene	16	U		PPBV	10/23/2003
4SG015013A	GSP3-1	107.5	Chloroethane	16	U		PPBV	10/23/2003
4SG015013A	GSP3-1	107.5	Chloroform	16	U		PPBV	10/23/2003
4SG015013A	GSP3-1	107.5	Chloromethane	16	U		PPBV	10/23/2003
4SG015013A	GSP3-1	107.5	cis-1,2-Dichloroethene	16	U		PPBV	10/23/2003
4SG015013A	GSP3-1	107.5	cis-1,3-Dichloropropene	16	U		PPBV	10/23/2003
4SG015013A	GSP3-1	107.5	Dichlorodifluoromethane	370			PPBV	10/23/2003
4SG015013A	GSP3-1	107.5	Ethane, 1,2-dichloro-1,1,2-trifluor	39	JN	NJ	PPBV	10/23/2003
4SG015013A	GSP3-1	107.5	Ethylbenzene	16	U		PPBV	10/23/2003
4SG015013A	GSP3-1	107.5	Freon 113	280			PPBV	10/23/2003
4SG015013A	GSP3-1	107.5	Freon 114	32	U		PPBV	10/23/2003
4SG015013A	GSP3-1	107.5	Hexachlorobutadiene	16	U		PPBV	10/23/2003
4SG015013A	GSP3-1	107.5	m,p-Xylenes	16	U		PPBV	10/23/2003
4SG015013A	GSP3-1	107.5	Methane, dichlorofluoro-	82	JN	NJ	PPBV	10/23/2003
4SG015013A	GSP3-1	107.5	Methylene Chloride	17	U		PPBV	10/23/2003
4SG015013A	GSP3-1	107.5	o-Xylene	16	U		PPBV	10/23/2003
4SG015013A	GSP3-1	107.5	Phenol	26	JN	NJ	PPBV	10/23/2003
4SG015013A	GSP3-1	107.5	Styrene	16	U		PPBV	10/23/2003
4SG015013A	GSP3-1	107.5	Tetrachloroethene	12	J	J	PPBV	10/23/2003
4SG015013A	GSP3-1	107.5	Toluene	16	U		PPBV	10/23/2003
4SG015013A	GSP3-1	107.5	trans-1,2-Dichloroethene	16	U		PPBV	10/23/2003
4SG015013A	GSP3-1	107.5	trans-1,3-Dichloropropene	16	U		PPBV	10/23/2003
4SG015013A	GSP3-1	107.5	Trichloroethene	37			PPBV	10/23/2003
4SG015013A	GSP3-1	107.5	Trichlorofluoromethane	440			PPBV	10/23/2003
4SG015013A	GSP3-1	107.5	UNKNOWN	50	J	J	PPBV	10/23/2003
4SG015013A	GSP3-1	107.5	Vinyl Chloride	16	U		PPBV	10/23/2003
4SG015013A	GSP3-1	107.5	Methane	0.76	U	U	PERCENT	10/23/2003
4SG012013A	GSP3-1	12.5	Methane	0.76	U	U	PERCENT	10/23/2003
4SG013013A	GSP3-1	37.5	Methane	0.76	U	U	PERCENT	10/23/2003
4SG014013A	GSP3-1	77.5	Methane	0.76	U	U	PERCENT	10/23/2003
4SG016013A	GSP3-2	12.5	1,1,1-Trichloroethane	260			PPBV	10/23/2003
4SG016013A	GSP3-2	12.5	1,1,2,2-Tetrachloroethane	16	U		PPBV	10/23/2003
4SG016013A	GSP3-2	12.5	1,1,2-Trichloroethane	16	U		PPBV	10/23/2003
4SG016013A	GSP3-2	12.5	1,1-Dichloroethane	42			PPBV	10/23/2003
4SG016013A	GSP3-2	12.5	1,1-Dichloroethene	16	U		PPBV	10/23/2003
4SG016013A	GSP3-2	12.5	1,2,4-Trichlorobenzene	16	U		PPBV	10/23/2003
4SG016013A	GSP3-2	12.5	1,2,4-Trimethylbenzene	16	U		PPBV	10/23/2003
4SG016013A	GSP3-2	12.5	1,2-Dibromoethane	16	U		PPBV	10/23/2003
4SG016013A	GSP3-2	12.5	1,2-Dichlorobenzene	16	U		PPBV	10/23/2003
4SG016013A	GSP3-2	12.5	1,2-Dichloroethane	16	U		PPBV	10/23/2003
4SG016013A	GSP3-2	12.5	1,2-Dichloropropane	16	U		PPBV	10/23/2003
4SG016013A	GSP3-2	12.5	1,3,5-Trimethylbenzene	16	U		PPBV	10/23/2003
4SG016013A	GSP3-2	12.5	1,3-Dichlorobenzene	16	U		PPBV	10/23/2003
4SG016013A	GSP3-2	12.5	1,4-Dichlorobenzene	16	U		PPBV	10/23/2003
4SG016013A	GSP3-2	12.5	2-Butanone	16	U		PPBV	10/23/2003
4SG016013A	GSP3-2	12.5	2-Hexanone	16	U		PPBV	10/23/2003
4SG016013A	GSP3-2	12.5	4-Ethyltoluene	16	U		PPBV	10/23/2003
4SG016013A	GSP3-2	12.5	4-Methyl-2-pentanone	16	U		PPBV	10/23/2003
4SG016013A	GSP3-2	12.5	Acetone	16	U		PPBV	10/23/2003
4SG016013A	GSP3-2	12.5	Benzene	16	U		PPBV	10/23/2003
4SG016013A	GSP3-2	12.5	Benzyl chloride	16	U		PPBV	10/23/2003
4SG016013A	GSP3-2	12.5	Bromomethane	16	U		PPBV	10/23/2003
4SG016013A	GSP3-2	12.5	Carbon disulfide	16	U		PPBV	10/23/2003
4SG016013A	GSP3-2	12.5	Carbon tetrachloride	16	U		PPBV	10/23/2003
4SG016013A	GSP3-2	12.5	Chlorobenzene	16	U		PPBV	10/23/2003
4SG016013A	GSP3-2	12.5	Chloroethane	16	U		PPBV	10/23/2003

Field Sample Number	Location	Depth	Compound	Sample Result	Result Qualifier	Validation Flag	Sample Units	Date Sample Collected
4SG016013A	GSP3-2	12.5	Chloroform	5	J	J	PPBV	10/23/2003
4SG016013A	GSP3-2	12.5	Chloromethane	16	U		PPBV	10/23/2003
4SG016013A	GSP3-2	12.5	cis-1,2-Dichloroethene	18			PPBV	10/23/2003
4SG016013A	GSP3-2	12.5	cis-1,3-Dichloropropene	16	U		PPBV	10/23/2003
4SG016013A	GSP3-2	12.5	Cyclotetrasiloxane, octamethyl-	35	JN	R	PPBV	10/23/2003
4SG016013A	GSP3-2	12.5	Dichlorodifluoromethane	180			PPBV	10/23/2003
4SG016013A	GSP3-2	12.5	Ethane, 1,2-dichloro-1,1,2-trifluor	31	JN	NJ	PPBV	10/23/2003
4SG016013A	GSP3-2	12.5	Ethane, 1-chloro-1,1-difluoro-	56	JN	NJ	PPBV	10/23/2003
4SG016013A	GSP3-2	12.5	Ethylbenzene	16	U		PPBV	10/23/2003
4SG016013A	GSP3-2	12.5	Freon 113	170			PPBV	10/23/2003
4SG016013A	GSP3-2	12.5	Freon 114	32	U		PPBV	10/23/2003
4SG016013A	GSP3-2	12.5	Hexachlorobutadiene	16	U		PPBV	10/23/2003
4SG016013A	GSP3-2	12.5	m,p-Xylenes	16	U		PPBV	10/23/2003
4SG016013A	GSP3-2	12.5	Methane, dichlorofluoro-	20	JN	NJ	PPBV	10/23/2003
4SG016013A	GSP3-2	12.5	Methylene Chloride	16	U		PPBV	10/23/2003
4SG016013A	GSP3-2	12.5	o-Xylene	16	U		PPBV	10/23/2003
4SG016013A	GSP3-2	12.5	Styrene	16	U		PPBV	10/23/2003
4SG016013A	GSP3-2	12.5	Tetrachloroethene	97			PPBV	10/23/2003
4SG016013A	GSP3-2	12.5	Toluene	16	U		PPBV	10/23/2003
4SG016013A	GSP3-2	12.5	trans-1,2-Dichloroethene	16	U		PPBV	10/23/2003
4SG016013A	GSP3-2	12.5	trans-1,3-Dichloropropene	16	U		PPBV	10/23/2003
4SG016013A	GSP3-2	12.5	Trichloroethene	120			PPBV	10/23/2003
4SG016013A	GSP3-2	12.5	Trichlorofluoromethane	180			PPBV	10/23/2003
4SG016013A	GSP3-2	12.5	UNKNOWN	27	J	J	PPBV	10/23/2003
4SG016013A	GSP3-2	12.5	UNKNOWN	36	J	J	PPBV	10/23/2003
4SG016013A	GSP3-2	12.5	UNKNOWN	17	J	J	PPBV	10/23/2003
4SG016013A	GSP3-2	12.5	Vinyl Chloride	16	U		PPBV	10/23/2003
4SG017013A	GSP3-2	37.5	1,1,1-Trichloroethane	930	D		PPBV	10/23/2003
4SG017013A	GSP3-2	37.5	1,1,2,2-Tetrachloroethane	16	U		PPBV	10/23/2003
4SG017013A	GSP3-2	37.5	1,1,2-Trichloroethane	16	U		PPBV	10/23/2003
4SG017013A	GSP3-2	37.5	1,1-Dichloroethane	230			PPBV	10/23/2003
4SG017013A	GSP3-2	37.5	1,1-Dichloroethene	90			PPBV	10/23/2003
4SG017013A	GSP3-2	37.5	1,2,4-Trichlorobenzene	16	U		PPBV	10/23/2003
4SG017013A	GSP3-2	37.5	1,2,4-Trimethylbenzene	16	U		PPBV	10/23/2003
4SG017013A	GSP3-2	37.5	1,2-Dibromoethane	16	U		PPBV	10/23/2003
4SG017013A	GSP3-2	37.5	1,2-Dichlorobenzene	16	U		PPBV	10/23/2003
4SG017013A	GSP3-2	37.5	1,2-Dichloroethane	16	U		PPBV	10/23/2003
4SG017013A	GSP3-2	37.5	1,2-Dichloropropane	16	U		PPBV	10/23/2003
4SG017013A	GSP3-2	37.5	1,3,5-Trimethylbenzene	16	U		PPBV	10/23/2003
4SG017013A	GSP3-2	37.5	1,3-Dichlorobenzene	16	U		PPBV	10/23/2003
4SG017013A	GSP3-2	37.5	1,4-Dichlorobenzene	16	U		PPBV	10/23/2003
4SG017013A	GSP3-2	37.5	2-Butanone	16	U		PPBV	10/23/2003
4SG017013A	GSP3-2	37.5	2-Hexanone	16	U		PPBV	10/23/2003
4SG017013A	GSP3-2	37.5	4-Ethyltoluene	16	U		PPBV	10/23/2003
4SG017013A	GSP3-2	37.5	4-Methyl-2-pentanone	16	U		PPBV	10/23/2003
4SG017013A	GSP3-2	37.5	Acetic acid, chlorofluoro-, ethyl e	170	JN	J	PPBV	10/23/2003
4SG017013A	GSP3-2	37.5	Acetone	20	U		PPBV	10/23/2003
4SG017013A	GSP3-2	37.5	Benzene	16	U		PPBV	10/23/2003
4SG017013A	GSP3-2	37.5	Benzyl chloride	16	U		PPBV	10/23/2003
4SG017013A	GSP3-2	37.5	Bromomethane	16	U		PPBV	10/23/2003
4SG017013A	GSP3-2	37.5	Carbon disulfide	16	U		PPBV	10/23/2003
4SG017013A	GSP3-2	37.5	Carbon tetrachloride	16	U		PPBV	10/23/2003
4SG017013A	GSP3-2	37.5	Chlorobenzene	16	U		PPBV	10/23/2003
4SG017013A	GSP3-2	37.5	Chloroethane	16	U		PPBV	10/23/2003
4SG017013A	GSP3-2	37.5	Chloroform	10	J	J	PPBV	10/23/2003
4SG017013A	GSP3-2	37.5	Chloromethane	16	U		PPBV	10/23/2003
4SG017013A	GSP3-2	37.5	cis-1,2-Dichloroethene	65			PPBV	10/23/2003
4SG017013A	GSP3-2	37.5	cis-1,3-Dichloropropene	16	U		PPBV	10/23/2003
4SG017013A	GSP3-2	37.5	Cyclotetrasiloxane, octamethyl-	130	JN	R	PPBV	10/23/2003
4SG017013A	GSP3-2	37.5	Dichlorodifluoromethane	750	D		PPBV	10/23/2003
4SG017013A	GSP3-2	37.5	Ethane, 1,2-dichloro-1,1,2-trifluor	130	JN	NJ	PPBV	10/23/2003
4SG017013A	GSP3-2	37.5	Ethane, 1-chloro-1,1-difluoro-	690	JN	NJ	PPBV	10/23/2003
4SG017013A	GSP3-2	37.5	Ethylbenzene	16	U		PPBV	10/23/2003
4SG017013A	GSP3-2	37.5	Freon 113	650			PPBV	10/23/2003
4SG017013A	GSP3-2	37.5	Freon 114	32	U		PPBV	10/23/2003
4SG017013A	GSP3-2	37.5	Hexachlorobutadiene	16	U		PPBV	10/23/2003
4SG017013A	GSP3-2	37.5	m,p-Xylenes	16	U		PPBV	10/23/2003
4SG017013A	GSP3-2	37.5	Methane, chlorodifluoro-	300	JN	NJ	PPBV	10/23/2003
4SG017013A	GSP3-2	37.5	Methane, dichlorofluoro-	230	JN	NJ	PPBV	10/23/2003
4SG017013A	GSP3-2	37.5	Methylene Chloride	16	U		PPBV	10/23/2003
4SG017013A	GSP3-2	37.5	o-Xylene	16	U		PPBV	10/23/2003

Field Sample Number	Location	Depth	Compound	Sample Result	Result Qualifier	Validation Flag	Sample Units	Date Sample Collected
4SG017013A	GSP3-2	37.5	Styrene	16	U		PPBV	10/23/2003
4SG017013A	GSP3-2	37.5	Tetrachloroethene	220			PPBV	10/23/2003
4SG017013A	GSP3-2	37.5	Toluene	16	U		PPBV	10/23/2003
4SG017013A	GSP3-2	37.5	trans-1,2-Dichloroethene	16	U		PPBV	10/23/2003
4SG017013A	GSP3-2	37.5	trans-1,3-Dichloropropene	16	U		PPBV	10/23/2003
4SG017013A	GSP3-2	37.5	Trichloroethene	200			PPBV	10/23/2003
4SG017013A	GSP3-2	37.5	Trichlorofluoromethane	1000	D		PPBV	10/23/2003
4SG017013A	GSP3-2	37.5	UNKNOWN	150	J	J	PPBV	10/23/2003
4SG017013A	GSP3-2	37.5	UNKNOWN	18	J	J	PPBV	10/23/2003
4SG017013A	GSP3-2	37.5	Vinyl Chloride	16	U		PPBV	10/23/2003
4SG018013A	GSP3-2	77.5	1,1,1-Trichloroethane	2700	D		PPBV	10/23/2003
4SG018013A	GSP3-2	77.5	1,1,2,2-Tetrachloroethane	17	U		PPBV	10/23/2003
4SG018013A	GSP3-2	77.5	1,1,2-Trichloroethane	17	U		PPBV	10/23/2003
4SG018013A	GSP3-2	77.5	1,1-Dichloroethane	360			PPBV	10/23/2003
4SG018013A	GSP3-2	77.5	1,1-Dichloroethene	390			PPBV	10/23/2003
4SG018013A	GSP3-2	77.5	1,2,4-Trichlorobenzene	17	U		PPBV	10/23/2003
4SG018013A	GSP3-2	77.5	1,2,4-Trimethylbenzene	17	U		PPBV	10/23/2003
4SG018013A	GSP3-2	77.5	1,2-Dibromoethane	17	U		PPBV	10/23/2003
4SG018013A	GSP3-2	77.5	1,2-Dichlorobenzene	17	U		PPBV	10/23/2003
4SG018013A	GSP3-2	77.5	1,2-Dichloroethane	17	U		PPBV	10/23/2003
4SG018013A	GSP3-2	77.5	1,2-Dichloropropane	17	U		PPBV	10/23/2003
4SG018013A	GSP3-2	77.5	1,3,5-Trimethylbenzene	17	U		PPBV	10/23/2003
4SG018013A	GSP3-2	77.5	1,3-Dichlorobenzene	17	U		PPBV	10/23/2003
4SG018013A	GSP3-2	77.5	1,4-Dichlorobenzene	17	U		PPBV	10/23/2003
4SG018013A	GSP3-2	77.5	1-Butanol, 3-methyl-	85	JN	NJ	PPBV	10/23/2003
4SG018013A	GSP3-2	77.5	2-Butanone	17	U		PPBV	10/23/2003
4SG018013A	GSP3-2	77.5	2-Hexanone	17	U		PPBV	10/23/2003
4SG018013A	GSP3-2	77.5	4-Ethyltoluene	17	U		PPBV	10/23/2003
4SG018013A	GSP3-2	77.5	4-Methyl-2-pentanone	17	U		PPBV	10/23/2003
4SG018013A	GSP3-2	77.5	Acetone	17	U		PPBV	10/23/2003
4SG018013A	GSP3-2	77.5	Benzene	17	U		PPBV	10/23/2003
4SG018013A	GSP3-2	77.5	Benzyl chloride	17	U		PPBV	10/23/2003
4SG018013A	GSP3-2	77.5	Bromomethane	17	U		PPBV	10/23/2003
4SG018013A	GSP3-2	77.5	Butane	340	JN	NJ	PPBV	10/23/2003
4SG018013A	GSP3-2	77.5	Butane, 2,2-dimethyl-	44	JN	NJ	PPBV	10/23/2003
4SG018013A	GSP3-2	77.5	Butane, 2-methyl-	70	JN	NJ	PPBV	10/23/2003
4SG018013A	GSP3-2	77.5	Carbon disulfide	17	U		PPBV	10/23/2003
4SG018013A	GSP3-2	77.5	Carbon tetrachloride	17	U		PPBV	10/23/2003
4SG018013A	GSP3-2	77.5	Chlorine dioxide	84	JN	NJ	PPBV	10/23/2003
4SG018013A	GSP3-2	77.5	Chlorobenzene	17	U		PPBV	10/23/2003
4SG018013A	GSP3-2	77.5	Chloroethane	17	U		PPBV	10/23/2003
4SG018013A	GSP3-2	77.5	Chloroform	8	J	J	PPBV	10/23/2003
4SG018013A	GSP3-2	77.5	Chloromethane	17	U		PPBV	10/23/2003
4SG018013A	GSP3-2	77.5	cis-1,2-Dichloroethene	140			PPBV	10/23/2003
4SG018013A	GSP3-2	77.5	cis-1,3-Dichloropropene	17	U		PPBV	10/23/2003
4SG018013A	GSP3-2	77.5	Dichlorodifluoromethane	1600	D		PPBV	10/23/2003
4SG018013A	GSP3-2	77.5	Ethane, 1,2-dichloro-1,1,2-trifluor	140	JN	NJ	PPBV	10/23/2003
4SG018013A	GSP3-2	77.5	Ethylbenzene	17	U		PPBV	10/23/2003
4SG018013A	GSP3-2	77.5	Freon 113	1200	D		PPBV	10/23/2003
4SG018013A	GSP3-2	77.5	Freon 114	34	U		PPBV	10/23/2003
4SG018013A	GSP3-2	77.5	Hexachlorobutadiene	17	U		PPBV	10/23/2003
4SG018013A	GSP3-2	77.5	Isobutane	1600	JN	NJ	PPBV	10/23/2003
4SG018013A	GSP3-2	77.5	m,p-Xylenes	17	U		PPBV	10/23/2003
4SG018013A	GSP3-2	77.5	Methane, dichlorofluoro-	580	JN	NJ	PPBV	10/23/2003
4SG018013A	GSP3-2	77.5	Methylene Chloride	17	U		PPBV	10/23/2003
4SG018013A	GSP3-2	77.5	N-(1-Methyl-3-oxobutylidene)-4-meth	36	J	J	PPBV	10/23/2003
4SG018013A	GSP3-2	77.5	o-Xylene	17	U		PPBV	10/23/2003
4SG018013A	GSP3-2	77.5	Phenol	20	JN	NJ	PPBV	10/23/2003
4SG018013A	GSP3-2	77.5	Styrene	17	U		PPBV	10/23/2003
4SG018013A	GSP3-2	77.5	Tetrachloroethene	16	J	J	PPBV	10/23/2003
4SG018013A	GSP3-2	77.5	Toluene	17	U		PPBV	10/23/2003
4SG018013A	GSP3-2	77.5	trans-1,2-Dichloroethene	17	U		PPBV	10/23/2003
4SG018013A	GSP3-2	77.5	trans-1,3-Dichloropropene	17	U		PPBV	10/23/2003
4SG018013A	GSP3-2	77.5	Trichloroethene	130			PPBV	10/23/2003
4SG018013A	GSP3-2	77.5	Trichlorofluoromethane	2300	D		PPBV	10/23/2003
4SG018013A	GSP3-2	77.5	Vinyl Chloride	17	U		PPBV	10/23/2003
4SG019013A	GSP3-2	107.5	1,1,1-Trichloroethane	450			PPBV	10/23/2003
4SG019013A	GSP3-2	107.5	1,1,2,2-Tetrachloroethane	16	U		PPBV	10/23/2003
4SG019013A	GSP3-2	107.5	1,1,2-Trichloroethane	16	U		PPBV	10/23/2003
4SG019013A	GSP3-2	107.5	1,1-Dichloroethane	16	U		PPBV	10/23/2003
4SG019013A	GSP3-2	107.5	1,1-Dichloroethene	130			PPBV	10/23/2003

Field Sample Number	Location	Depth	Compound	Sample Result	Result Qualifier	Validation Flag	Sample Units	Date Sample Collected
4SG019013A	GSP3-2	107.5	1,2,4-Trichlorobenzene	16	U		PPBV	10/23/2003
4SG019013A	GSP3-2	107.5	1,2,4-Trimethylbenzene	16	U		PPBV	10/23/2003
4SG019013A	GSP3-2	107.5	1,2-Dibromoethane	16	U		PPBV	10/23/2003
4SG019013A	GSP3-2	107.5	1,2-Dichlorobenzene	16	U		PPBV	10/23/2003
4SG019013A	GSP3-2	107.5	1,2-Dichloroethane	16	U		PPBV	10/23/2003
4SG019013A	GSP3-2	107.5	1,2-Dichloropropane	16	U		PPBV	10/23/2003
4SG019013A	GSP3-2	107.5	1,3,5-Trimethylbenzene	16	U		PPBV	10/23/2003
4SG019013A	GSP3-2	107.5	1,3-Dichlorobenzene	16	U		PPBV	10/23/2003
4SG019013A	GSP3-2	107.5	1,4-Dichlorobenzene	16	U		PPBV	10/23/2003
4SG019013A	GSP3-2	107.5	2-Butanone	16	U		PPBV	10/23/2003
4SG019013A	GSP3-2	107.5	2-Hexanone	16	U		PPBV	10/23/2003
4SG019013A	GSP3-2	107.5	4-Ethyltoluene	16	U		PPBV	10/23/2003
4SG019013A	GSP3-2	107.5	4-Methyl-2-pentanone	16	U		PPBV	10/23/2003
4SG019013A	GSP3-2	107.5	Acetone	16	U		PPBV	10/23/2003
4SG019013A	GSP3-2	107.5	Benzene	16	U		PPBV	10/23/2003
4SG019013A	GSP3-2	107.5	Benzyl chloride	16	U		PPBV	10/23/2003
4SG019013A	GSP3-2	107.5	Bromomethane	16	U		PPBV	10/23/2003
4SG019013A	GSP3-2	107.5	Butane	40	JN	NJ	PPBV	10/23/2003
4SG019013A	GSP3-2	107.5	Butane, 2-methyl-	43	JN	NJ	PPBV	10/23/2003
4SG019013A	GSP3-2	107.5	Carbon disulfide	16	U		PPBV	10/23/2003
4SG019013A	GSP3-2	107.5	Carbon tetrachloride	6	J	J	PPBV	10/23/2003
4SG019013A	GSP3-2	107.5	Chlorobenzene	16	U		PPBV	10/23/2003
4SG019013A	GSP3-2	107.5	Chloroethane	16	U		PPBV	10/23/2003
4SG019013A	GSP3-2	107.5	Chloroform	16	U		PPBV	10/23/2003
4SG019013A	GSP3-2	107.5	Chloromethane	16	U		PPBV	10/23/2003
4SG019013A	GSP3-2	107.5	cis-1,2-Dichloroethene	16	U		PPBV	10/23/2003
4SG019013A	GSP3-2	107.5	cis-1,3-Dichloropropene	16	U		PPBV	10/23/2003
4SG019013A	GSP3-2	107.5	Dichlorodifluoromethane	720			PPBV	10/23/2003
4SG019013A	GSP3-2	107.5	Ethylbenzene	16	U		PPBV	10/23/2003
4SG019013A	GSP3-2	107.5	Freon 113	520			PPBV	10/23/2003
4SG019013A	GSP3-2	107.5	Freon 114	46			PPBV	10/23/2003
4SG019013A	GSP3-2	107.5	Hexachlorobutadiene	16	U		PPBV	10/23/2003
4SG019013A	GSP3-2	107.5	m,p-Xylenes	16	U		PPBV	10/23/2003
4SG019013A	GSP3-2	107.5	Methane, dichlorofluoro-	19	JN	NJ	PPBV	10/23/2003
4SG019013A	GSP3-2	107.5	Methylene Chloride	16	U		PPBV	10/23/2003
4SG019013A	GSP3-2	107.5	o-Xylene	16	U		PPBV	10/23/2003
4SG019013A	GSP3-2	107.5	Styrene	16	U		PPBV	10/23/2003
4SG019013A	GSP3-2	107.5	Tetrachloroethene	7	J	J	PPBV	10/23/2003
4SG019013A	GSP3-2	107.5	Toluene	16	U		PPBV	10/23/2003
4SG019013A	GSP3-2	107.5	trans-1,2-Dichloroethene	16	U		PPBV	10/23/2003
4SG019013A	GSP3-2	107.5	trans-1,3-Dichloropropene	16	U		PPBV	10/23/2003
4SG019013A	GSP3-2	107.5	Trichloroethene	11	J	J	PPBV	10/23/2003
4SG019013A	GSP3-2	107.5	Trichlorofluoromethane	790			PPBV	10/23/2003
4SG019013A	GSP3-2	107.5	UNKNOWN	23	J	J	PPBV	10/23/2003
4SG019013A	GSP3-2	107.5	Vinyl Chloride	16	U		PPBV	10/23/2003
4SG019013A	GSP3-2	107.5	Methane	0.76	U		PERCENT	10/23/2003
4SG016013A	GSP3-2	12.5	Methane	0.76	U	U	PERCENT	10/23/2003
4SG017013A	GSP3-2	37.5	Methane	0.76	U	U	PERCENT	10/23/2003
4SG018013A	GSP3-2	77.5	Methane	0.76	U		PERCENT	10/23/2003
4SG020013A	QC	NA	1,1,1-Trichloroethane	1	U		PPBV	10/23/2003
4SG020013A	QC	NA	1,1,2,2-Tetrachloroethane	1	U		PPBV	10/23/2003
4SG020013A	QC	NA	1,1,2-Trichloroethane	1	U		PPBV	10/23/2003
4SG020013A	QC	NA	1,1-Dichloroethane	1	U		PPBV	10/23/2003
4SG020013A	QC	NA	1,1-Dichloroethene	1	U		PPBV	10/23/2003
4SG020013A	QC	NA	1,2,4-Trichlorobenzene	1	U		PPBV	10/23/2003
4SG020013A	QC	NA	1,2,4-Trimethylbenzene	1	U		PPBV	10/23/2003
4SG020013A	QC	NA	1,2-Dibromoethane	1	U		PPBV	10/23/2003
4SG020013A	QC	NA	1,2-Dichlorobenzene	1	U		PPBV	10/23/2003
4SG020013A	QC	NA	1,2-Dichloroethane	1	U		PPBV	10/23/2003
4SG020013A	QC	NA	1,2-Dichloropropane	1	U		PPBV	10/23/2003
4SG020013A	QC	NA	1,3,5-Trimethylbenzene	1	U		PPBV	10/23/2003
4SG020013A	QC	NA	1,3-Dichlorobenzene	1	U		PPBV	10/23/2003
4SG020013A	QC	NA	1,4-Dichlorobenzene	1	U		PPBV	10/23/2003
4SG020013A	QC	NA	2-Butanone	1	U		PPBV	10/23/2003
4SG020013A	QC	NA	2-Hexanone	1	U		PPBV	10/23/2003
4SG020013A	QC	NA	4-Ethyltoluene	1	U		PPBV	10/23/2003
4SG020013A	QC	NA	4-Methyl-2-pentanone	1	U		PPBV	10/23/2003
4SG020013A	QC	NA	Acetone	5			PPBV	10/23/2003
4SG020013A	QC	NA	Benzene	0.5	J	J	PPBV	10/23/2003
4SG020013A	QC	NA	Benzyl chloride	1	U		PPBV	10/23/2003
4SG020013A	QC	NA	Bromomethane	1	U		PPBV	10/23/2003

Field Sample Number	Location	Depth	Compound	Sample Result	Result Qualifier	Validation Flag	Sample Units	Date Sample Collected
4SG020013A	QC	NA	Butane, 2-methyl-	3	JN	NJ	PPBV	10/23/2003
4SG020013A	QC	NA	Carbon disulfide	1	U		PPBV	10/23/2003
4SG020013A	QC	NA	Carbon tetrachloride	1	U		PPBV	10/23/2003
4SG020013A	QC	NA	Chlorobenzene	1	U		PPBV	10/23/2003
4SG020013A	QC	NA	Chloroethane	1	U		PPBV	10/23/2003
4SG020013A	QC	NA	Chloroform	1	U		PPBV	10/23/2003
4SG020013A	QC	NA	Chloromethane	1	U		PPBV	10/23/2003
4SG020013A	QC	NA	cis-1,2-Dichloroethene	1	U		PPBV	10/23/2003
4SG020013A	QC	NA	cis-1,3-Dichloropropene	1	U		PPBV	10/23/2003
4SG020013A	QC	NA	Decane	2	JN	NJ	PPBV	10/23/2003
4SG020013A	QC	NA	Dichlorodifluoromethane	0.8	J	J	PPBV	10/23/2003
4SG020013A	QC	NA	Ethylbenzene	1	U		PPBV	10/23/2003
4SG020013A	QC	NA	Freon 113	1	U		PPBV	10/23/2003
4SG020013A	QC	NA	Freon 114	3	U		PPBV	10/23/2003
4SG020013A	QC	NA	Hexachlorobutadiene	1	U		PPBV	10/23/2003
4SG020013A	QC	NA	Hexane	2	JN	NJ	PPBV	10/23/2003
4SG020013A	QC	NA	m,p-Xylenes	1	U		PPBV	10/23/2003
4SG020013A	QC	NA	Methane	0.76	U	U	PERCENT	10/23/2003
4SG020013A	QC	NA	Methylene Chloride	6			PPBV	10/23/2003
4SG020013A	QC	NA	o-Xylene	1	U		PPBV	10/23/2003
4SG020013A	QC	NA	Styrene	1	U		PPBV	10/23/2003
4SG020013A	QC	NA	Tetrachloroethene	1	U		PPBV	10/23/2003
4SG020013A	QC	NA	Toluene	0.6	J	J	PPBV	10/23/2003
4SG020013A	QC	NA	trans-1,2-Dichloroethene	1	U		PPBV	10/23/2003
4SG020013A	QC	NA	trans-1,3-Dichloropropene	1	U		PPBV	10/23/2003
4SG020013A	QC	NA	Trichloroethene	1	U		PPBV	10/23/2003
4SG020013A	QC	NA	Trichlorofluoromethane	0.5	J	J	PPBV	10/23/2003
4SG020013A	QC	NA	Undecane	4	JN	NJ	PPBV	10/23/2003
4SG020013A	QC	NA	UNKNOWN	3	J	J	PPBV	10/23/2003
4SG020013A	QC	NA	UNKNOWN	9	J	J	PPBV	10/23/2003
4SG020013A	QC	NA	UNKNOWN	11	J	J	PPBV	10/23/2003
4SG020013A	QC	NA	UNKNOWN	2	J	J	PPBV	10/23/2003
4SG020013A	QC	NA	Vinyl Chloride	1	U		PPBV	10/23/2003

Field Sample Number	Location	Compound	Sample Result	Result Qualifier	Validation Flag	Sample Units	Date Sample Collected	Method Code	Filtered Metal Sample
4GW04501N2	CFA-1	Nitrogen, Nitrate/Nitrite	2.11			MG/L	11/04/2003	E353.1	F
4GW04601N2	CFA-2	Nitrogen, Nitrate/Nitrite	2.4			MG/L	11/04/2003	E353.1	F
4GW02101VL	CFA-MON-001	1,1,1-Trichloroethane	5	U		UG/L	11/04/2003	SW8260B	F
4GW02101VL	CFA-MON-001	1,1,2-Tetrachloroethane	5	U		UG/L	11/04/2003	SW8260B	F
4GW02101VL	CFA-MON-001	1,1,2,2-Trichloro-1,2,2-trifluoroethane	5	U		UG/L	11/04/2003	SW8260B	F
4GW02101VL	CFA-MON-001	1,1,2-Trichloroethane	5	U		UG/L	11/04/2003	SW8260B	F
4GW02101VL	CFA-MON-001	1,1-Dichloroethane	5	U		UG/L	11/04/2003	SW8260B	F
4GW02101VL	CFA-MON-001	1,1-Dichloroethene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02101VL	CFA-MON-001	1,2,4-Trichlorobenzene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02101VL	CFA-MON-001	1,2,4-Trimethylbenzene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02101VL	CFA-MON-001	1,2-Dibromo-3-chloropropane	10	U	UJ	UG/L	11/04/2003	SW8260B	F
4GW02101VL	CFA-MON-001	1,2-Dibromoethane	5	U		UG/L	11/04/2003	SW8260B	F
4GW02101VL	CFA-MON-001	1,2-Dichlorobenzene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02101VL	CFA-MON-001	1,2-Dichloroethane	5	U		UG/L	11/04/2003	SW8260B	F
4GW02101VL	CFA-MON-001	1,2-Dichloropropane	5	U		UG/L	11/04/2003	SW8260B	F
4GW02101VL	CFA-MON-001	1,3,5-Trimethylbenzene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02101VL	CFA-MON-001	1,3-Dichlorobenzene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02101VL	CFA-MON-001	1,4-Dichlorobenzene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02101VL	CFA-MON-001	2-Butanone	10	U		UG/L	11/04/2003	SW8260B	F
4GW02101VL	CFA-MON-001	2-Chloroethyl vinyl ether	20	U	UJ	UG/L	11/04/2003	SW8260B	F
4GW02101VL	CFA-MON-001	2-Hexanone	10	U		UG/L	11/04/2003	SW8260B	F
4GW02101VL	CFA-MON-001	4-Methyl-2-pentanone	10	U	R	UG/L	11/04/2003	SW8260B	F
4GW02101VL	CFA-MON-001	Acetone	10	U	R	UG/L	11/04/2003	SW8260B	F
4GW02101VL	CFA-MON-001	Acetonitrile	50	U		UG/L	11/04/2003	SW8260B	F
4GW02101A1	CFA-MON-001	Alkalinity, Total as CaCO3	107			MG/L	11/04/2003	E310.1	F
4GW02101C1	CFA-MON-001	Aluminum	149	B		UG/L	11/04/2003	ILM04.0	F
4GW02101C1	CFA-MON-001	Antimony	4	B	U	UG/L	11/04/2003	ILM04.0	F
4GW02101C1	CFA-MON-001	Arsenic	4.4	B	U	UG/L	11/04/2003	ILM04.0	F
4GW02101C1	CFA-MON-001	Barium	25.4	B		UG/L	11/04/2003	ILM04.0	F
4GW02101VL	CFA-MON-001	Benzene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02101C1	CFA-MON-001	Beryllium	0.23	U		UG/L	11/04/2003	ILM04.0	F
4GW02101VL	CFA-MON-001	Bromodichloromethane	5	U		UG/L	11/04/2003	SW8260B	F
4GW02101VL	CFA-MON-001	Bromoform	5	U		UG/L	11/04/2003	SW8260B	F
4GW02101VL	CFA-MON-001	Bromomethane	10	U		UG/L	11/04/2003	SW8260B	F
4GW02101C1	CFA-MON-001	Cadmium	0.61	U		UG/L	11/04/2003	ILM04.0	F
4GW02101C1	CFA-MON-001	Calcium	30900			UG/L	11/04/2003	ILM04.0	F
4GW02101VL	CFA-MON-001	Carbon disulfide	5	U		UG/L	11/04/2003	SW8260B	F
4GW02101VL	CFA-MON-001	Carbon tetrachloride	5	U		UG/L	11/04/2003	SW8260B	F
4GW02101F3	CFA-MON-001	Chloride	23.2		J	MG/L	11/04/2003	E300	F
4GW02101VL	CFA-MON-001	Chlorobenzene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02101VL	CFA-MON-001	Chloroethane	10	U		UG/L	11/04/2003	SW8260B	F
4GW02101VL	CFA-MON-001	Chloroform	5	U		UG/L	11/04/2003	SW8260B	F
4GW02101VL	CFA-MON-001	Chloromethane	10	U		UG/L	11/04/2003	SW8260B	F
4GW02101C1	CFA-MON-001	Chromium	13.1			UG/L	11/04/2003	ILM04.0	F
4GW02101VL	CFA-MON-001	cis-1,2-Dichloroethene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02101VL	CFA-MON-001	cis-1,3-Dichloropropene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02101C1	CFA-MON-001	Cobalt	1.1	U		UG/L	11/04/2003	ILM04.0	F
4GW02101C1	CFA-MON-001	Copper	2	U		UG/L	11/04/2003	ILM04.0	F
4GW02101VL	CFA-MON-001	Cyclohexane	5	U		UG/L	11/04/2003	SW8260B	F
4GW02101VL	CFA-MON-001	Dibromochloromethane	5	U		UG/L	11/04/2003	SW8260B	F
4GW02101VL	CFA-MON-001	Dichlorodifluoromethane	10	U		UG/L	11/04/2003	SW8260B	F
4GW02101VL	CFA-MON-001	Ethylbenzene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02101F3	CFA-MON-001	Fluoride	0.229	J		MG/L	11/04/2003	E300	F
4GW02101C1	CFA-MON-001	Iron	215			UG/L	11/04/2003	ILM04.0	F
4GW02101VL	CFA-MON-001	Isobutanol	200	U	R	UG/L	11/04/2003	SW8260B	F
4GW02101VL	CFA-MON-001	Isopropylbenzene	10	U		UG/L	11/04/2003	SW8260B	F
4GW02101C1	CFA-MON-001	Lead	2.1	U		UG/L	11/04/2003	ILM04.0	F
4GW02101C1	CFA-MON-001	Magnesium	12700			UG/L	11/04/2003	ILM04.0	F
4GW02101C1	CFA-MON-001	Manganese	6.9	B		UG/L	11/04/2003	ILM04.0	F
4GW02101C1	CFA-MON-001	Mercury	0.03	U	UJ	UG/L	11/04/2003	ILM04.0	F
4GW02101VL	CFA-MON-001	Methyl acetate	25	U	R	UG/L	11/04/2003	SW8260B	F
4GW02101VL	CFA-MON-001	Methyl cyclohexane	5	U		UG/L	11/04/2003	SW8260B	F
4GW02101VL	CFA-MON-001	Methyl t-butyl ether	5	U		UG/L	11/04/2003	SW8260B	F
4GW02101VL	CFA-MON-001	Methylene Chloride	14			UG/L	11/04/2003	SW8260B	F
4GW02101VL	CFA-MON-001	Naphthalene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02101C1	CFA-MON-001	Nickel	4.2	B		UG/L	11/04/2003	ILM04.0	F
4GW02101N2	CFA-MON-001	Nitrogen, Nitrate/Nitrite	1.38			MG/L	11/04/2003	E353.1	F
4GW02101C1	CFA-MON-001	Potassium	2770	B		UG/L	11/04/2003	ILM04.0	F
4GW02101C1	CFA-MON-001	Selenium	4.6	U		UG/L	11/04/2003	ILM04.0	F
4GW02101C1	CFA-MON-001	Silver	2	U		UG/L	11/04/2003	ILM04.0	F

Field Sample Number	Location	Compound	Sample Result	Result Qualifier	Validation Flag	Sample Units	Date Sample Collected	Method Code	Filtered Metal Sample
4GW02101C1	CFA-MON-001	Sodium	9270			UG/L	11/04/2003	ILM04.0	F
4GW02101VL	CFA-MON-001	Styrene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02101F3	CFA-MON-001	Sulfate	20.7		J	MG/L	11/04/2003	E300	F
4GW02101VL	CFA-MON-001	Tetrachloroethene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02101C1	CFA-MON-001	Thallium	4.1	U		UG/L	11/04/2003	ILM04.0	F
4GW02101VL	CFA-MON-001	Toluene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02101VL	CFA-MON-001	trans-1,2-Dichloroethene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02101VL	CFA-MON-001	trans-1,3-Dichloropropene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02101VL	CFA-MON-001	Trichloroethene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02101VL	CFA-MON-001	Trichlorofluoromethane	5	U		UG/L	11/04/2003	SW8260B	F
4GW02101C1	CFA-MON-001	Vanadium	7.9	B	U	UG/L	11/04/2003	ILM04.0	F
4GW02101VL	CFA-MON-001	Vinyl Chloride	5	U		UG/L	11/04/2003	SW8260B	F
4GW02101VL	CFA-MON-001	Xylene (Total)	10	U		UG/L	11/04/2003	SW8260B	F
4GW02101C1	CFA-MON-001	Zinc	39	E	J	UG/L	11/04/2003	ILM04.0	F
4GW02201VL	CFA-MON-002	1,1,1-Trichloroethane	5	U		UG/L	11/04/2003	SW8260B	F
4GW02201VL	CFA-MON-002	1,1,2,2-Tetrachloroethane	5	U		UG/L	11/04/2003	SW8260B	F
4GW02201VL	CFA-MON-002	1,1,2-Trichloro-1,2,2-trifluoroethane	5	U		UG/L	11/04/2003	SW8260B	F
4GW02201VL	CFA-MON-002	1,1,2-Trichloroethane	5	U		UG/L	11/04/2003	SW8260B	F
4GW02201VL	CFA-MON-002	1,1-Dichloroethane	5	U		UG/L	11/04/2003	SW8260B	F
4GW02201VL	CFA-MON-002	1,1-Dichloroethene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02201VL	CFA-MON-002	1,2,4-Trichlorobenzene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02201VL	CFA-MON-002	1,2,4-Trimethylbenzene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02201VL	CFA-MON-002	1,2-Dibromo-3-chloropropane	10	U		UG/L	11/04/2003	SW8260B	F
4GW02201VL	CFA-MON-002	1,2-Dibromoethane	5	U		UG/L	11/04/2003	SW8260B	F
4GW02201VL	CFA-MON-002	1,2-Dichlorobenzene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02201VL	CFA-MON-002	1,2-Dichloroethane	5	U		UG/L	11/04/2003	SW8260B	F
4GW02201VL	CFA-MON-002	1,2-Dichloropropane	5	U		UG/L	11/04/2003	SW8260B	F
4GW02201VL	CFA-MON-002	1,3,5-Trimethylbenzene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02201VL	CFA-MON-002	1,3-Dichlorobenzene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02201VL	CFA-MON-002	1,4-Dichlorobenzene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02201VL	CFA-MON-002	2-Butanone	10	U		UG/L	11/04/2003	SW8260B	F
4GW02201VL	CFA-MON-002	2-Chloroethyl vinyl ether	20	U	UJ	UG/L	11/04/2003	SW8260B	F
4GW02201VL	CFA-MON-002	2-Hexanone	10	U		UG/L	11/04/2003	SW8260B	F
4GW02201VL	CFA-MON-002	4-Methyl-2-pentanone	10	U		UG/L	11/04/2003	SW8260B	F
4GW02201VL	CFA-MON-002	Acetone	10	U	R	UG/L	11/04/2003	SW8260B	F
4GW02201VL	CFA-MON-002	Acetonitrile	50	U	R	UG/L	11/04/2003	SW8260B	F
4GW02201A1	CFA-MON-002	Alkalinity, Total as CaCO3	110			MG/L	11/04/2003	E310.1	F
4GW02201C1	CFA-MON-002	Aluminum	416			UG/L	11/04/2003	ILM04.0	F
4GW02201C1	CFA-MON-002	Antimony	3.3	U		UG/L	11/04/2003	ILM04.0	F
4GW02201C1	CFA-MON-002	Arsenic	3.6	B	U	UG/L	11/04/2003	ILM04.0	F
4GW02201C1	CFA-MON-002	Barium	51.6	B		UG/L	11/04/2003	ILM04.0	F
4GW02201VL	CFA-MON-002	Benzene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02201C1	CFA-MON-002	Beryllium	0.23	U		UG/L	11/04/2003	ILM04.0	F
4GW02201VL	CFA-MON-002	Bromodichloromethane	5	U		UG/L	11/04/2003	SW8260B	F
4GW02201VL	CFA-MON-002	Bromoform	5	U		UG/L	11/04/2003	SW8260B	F
4GW02201VL	CFA-MON-002	Bromomethane	10	U		UG/L	11/04/2003	SW8260B	F
4GW02201C1	CFA-MON-002	Cadmium	0.61	U		UG/L	11/04/2003	ILM04.0	F
4GW02201C1	CFA-MON-002	Calcium	54600			UG/L	11/04/2003	ILM04.0	F
4GW02201VL	CFA-MON-002	Carbon disulfide	5	U		UG/L	11/04/2003	SW8260B	F
4GW02201VL	CFA-MON-002	Carbon tetrachloride	5	U		UG/L	11/04/2003	SW8260B	F
4GW02201F3	CFA-MON-002	Chloride	54.2		J	MG/L	11/04/2003	E300	F
4GW02201VL	CFA-MON-002	Chlorobenzene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02201VL	CFA-MON-002	Chloroethane	10	U		UG/L	11/04/2003	SW8260B	F
4GW02201VL	CFA-MON-002	Chloroform	5	U		UG/L	11/04/2003	SW8260B	F
4GW02201VL	CFA-MON-002	Chloromethane	10	U		UG/L	11/04/2003	SW8260B	F
4GW02201C1	CFA-MON-002	Chromium	42.4			UG/L	11/04/2003	ILM04.0	F
4GW02201VL	CFA-MON-002	cis-1,2-Dichloroethene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02201VL	CFA-MON-002	cis-1,3-Dichloropropene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02201C1	CFA-MON-002	Cobalt	1.1	B		UG/L	11/04/2003	ILM04.0	F
4GW02201C1	CFA-MON-002	Copper	14.9	B		UG/L	11/04/2003	ILM04.0	F
4GW02201VL	CFA-MON-002	Cyclohexane	5	U		UG/L	11/04/2003	SW8260B	F
4GW02201VL	CFA-MON-002	Dibromochloromethane	5	U		UG/L	11/04/2003	SW8260B	F
4GW02201VL	CFA-MON-002	Dichlorodifluoromethane	10	U		UG/L	11/04/2003	SW8260B	F
4GW02201VL	CFA-MON-002	Ethylbenzene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02201F3	CFA-MON-002	Fluoride	0.201	J		MG/L	11/04/2003	E300	F
4GW02201C1	CFA-MON-002	Iron	1670			UG/L	11/04/2003	ILM04.0	F
4GW02201VL	CFA-MON-002	Isobutanol	200	U		UG/L	11/04/2003	SW8260B	F
4GW02201VL	CFA-MON-002	Isopropylbenzene	10	U		UG/L	11/04/2003	SW8260B	F
4GW02201C1	CFA-MON-002	Lead	2.1	U		UG/L	11/04/2003	ILM04.0	F
4GW02201C1	CFA-MON-002	Magnesium	23100			UG/L	11/04/2003	ILM04.0	F

Field Sample Number	Location	Compound	Sample Result	Result Qualifier	Validation Flag	Sample Units	Date Sample Collected	Method Code	Filtered Metal Sample
4GW02201C1	CFA-MON-002	Manganese	34.1			UG/L	11/04/2003	ILM04.0	F
4GW02201C1	CFA-MON-002	Mercury	0.03	U	UJ	UG/L	11/04/2003	ILM04.0	F
4GW02201VL	CFA-MON-002	Methyl acetate	25	U	R	UG/L	11/04/2003	SW8260B	F
4GW02201VL	CFA-MON-002	Methyl cyclohexane	5	U		UG/L	11/04/2003	SW8260B	F
4GW02201VL	CFA-MON-002	Methyl t-butyl ether	5	U		UG/L	11/04/2003	SW8260B	F
4GW02201VL	CFA-MON-002	Methylene Chloride	13			UG/L	11/04/2003	SW8260B	F
4GW02201VL	CFA-MON-002	Naphthalene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02201C1	CFA-MON-002	Nickel	36.7	B		UG/L	11/04/2003	ILM04.0	F
4GW02201N2	CFA-MON-002	Nitrogen, Nitrate/Nitrite	21.3			MG/L	11/04/2003	E353.1	F
4GW02201C1	CFA-MON-002	Potassium	4100	B		UG/L	11/04/2003	ILM04.0	F
4GW02201C1	CFA-MON-002	Selenium	4.6	U		UG/L	11/04/2003	ILM04.0	F
4GW02201C1	CFA-MON-002	Silver	2	U		UG/L	11/04/2003	ILM04.0	F
4GW02201C1	CFA-MON-002	Sodium	15300			UG/L	11/04/2003	ILM04.0	F
4GW02201VL	CFA-MON-002	Styrene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02201F3	CFA-MON-002	Sulfate	29.8		J	MG/L	11/04/2003	E300	F
4GW02201VL	CFA-MON-002	Tetrachloroethene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02201C1	CFA-MON-002	Thallium	4.1	U		UG/L	11/04/2003	ILM04.0	F
4GW02201VL	CFA-MON-002	Toluene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02201VL	CFA-MON-002	trans-1,2-Dichloroethene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02201VL	CFA-MON-002	trans-1,3-Dichloropropene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02201VL	CFA-MON-002	Trichloroethene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02201VL	CFA-MON-002	Trichlorofluoromethane	5	U		UG/L	11/04/2003	SW8260B	F
4GW02201C1	CFA-MON-002	Vanadium	9.1	B	U	UG/L	11/04/2003	ILM04.0	F
4GW02201VL	CFA-MON-002	Vinyl Chloride	5	U		UG/L	11/04/2003	SW8260B	F
4GW02201VL	CFA-MON-002	Xylene (Total)	10	U		UG/L	11/04/2003	SW8260B	F
4GW02201C1	CFA-MON-002	Zinc	268	E	J	UG/L	11/04/2003	ILM04.0	F
4GW02301VL	CFA-MON-003	1,1,1-Trichloroethane	5	U		UG/L	11/04/2003	SW8260B	F
4GW02301VL	CFA-MON-003	1,1,2,2-Tetrachloroethane	5	U		UG/L	11/04/2003	SW8260B	F
4GW02301VL	CFA-MON-003	1,1,2,2-Trichloro-1,2,2-trifluoroethane	5	U		UG/L	11/04/2003	SW8260B	F
4GW02301VL	CFA-MON-003	1,1,2-Trichloroethane	5	U		UG/L	11/04/2003	SW8260B	F
4GW02301VL	CFA-MON-003	1,1-Dichloroethane	5	U		UG/L	11/04/2003	SW8260B	F
4GW02301VL	CFA-MON-003	1,1-Dichloroethene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02301VL	CFA-MON-003	1,2,4-Trichlorobenzene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02301VL	CFA-MON-003	1,2,4-Trimethylbenzene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02301VL	CFA-MON-003	1,2-Dibromo-3-chloropropane	10	U		UG/L	11/04/2003	SW8260B	F
4GW02301VL	CFA-MON-003	1,2-Dibromoethane	5	U		UG/L	11/04/2003	SW8260B	F
4GW02301VL	CFA-MON-003	1,2-Dichlorobenzene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02301VL	CFA-MON-003	1,2-Dichloroethane	5	U		UG/L	11/04/2003	SW8260B	F
4GW02301VL	CFA-MON-003	1,2-Dichloropropane	5	U		UG/L	11/04/2003	SW8260B	F
4GW02301VL	CFA-MON-003	1,3,5-Trimethylbenzene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02301VL	CFA-MON-003	1,3-Dichlorobenzene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02301VL	CFA-MON-003	1,4-Dichlorobenzene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02301VL	CFA-MON-003	2-Butanone	10	U		UG/L	11/04/2003	SW8260B	F
4GW02301VL	CFA-MON-003	2-Chloroethyl vinyl ether	20	U	UJ	UG/L	11/04/2003	SW8260B	F
4GW02301VL	CFA-MON-003	2-Hexanone	10	U		UG/L	11/04/2003	SW8260B	F
4GW02301VL	CFA-MON-003	4-Methyl-2-pentanone	10	U		UG/L	11/04/2003	SW8260B	F
4GW02301VL	CFA-MON-003	Acetone	10	U	R	UG/L	11/04/2003	SW8260B	F
4GW02301VL	CFA-MON-003	Acetonitrile	50	U	R	UG/L	11/04/2003	SW8260B	F
4GW02301A1	CFA-MON-003	Alkalinity, Total as CaCO3	104			MG/L	11/04/2003	E310.1	F
4GW02301C1	CFA-MON-003	Aluminum	109	B		UG/L	11/04/2003	ILM04.0	F
4GW02301C1	CFA-MON-003	Antimony	3.3	U		UG/L	11/04/2003	ILM04.0	F
4GW02301C1	CFA-MON-003	Arsenic	2.4	B	U	UG/L	11/04/2003	ILM04.0	F
4GW02301C1	CFA-MON-003	Barium	42.3	B		UG/L	11/04/2003	ILM04.0	F
4GW02301VL	CFA-MON-003	Benzene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02301C1	CFA-MON-003	Beryllium	0.23	U		UG/L	11/04/2003	ILM04.0	F
4GW02301VL	CFA-MON-003	Bromodichloromethane	5	U		UG/L	11/04/2003	SW8260B	F
4GW02301VL	CFA-MON-003	Bromoform	5	U		UG/L	11/04/2003	SW8260B	F
4GW02301VL	CFA-MON-003	Bromomethane	10	U		UG/L	11/04/2003	SW8260B	F
4GW02301C1	CFA-MON-003	Cadmium	0.61	U		UG/L	11/04/2003	ILM04.0	F
4GW02301C1	CFA-MON-003	Calcium	43600			UG/L	11/04/2003	ILM04.0	F
4GW02301VL	CFA-MON-003	Carbon disulfide	5	U		UG/L	11/04/2003	SW8260B	F
4GW02301VL	CFA-MON-003	Carbon tetrachloride	5	U		UG/L	11/04/2003	SW8260B	F
4GW02301F3	CFA-MON-003	Chloride	44.4		J	MG/L	11/04/2003	E300	F
4GW02301VL	CFA-MON-003	Chlorobenzene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02301VL	CFA-MON-003	Chloroethane	10	U		UG/L	11/04/2003	SW8260B	F
4GW02301VL	CFA-MON-003	Chloroform	5	U		UG/L	11/04/2003	SW8260B	F
4GW02301VL	CFA-MON-003	Chloromethane	10	U		UG/L	11/04/2003	SW8260B	F
4GW02301C1	CFA-MON-003	Chromium	13			UG/L	11/04/2003	ILM04.0	F
4GW02301VL	CFA-MON-003	cis-1,2-Dichloroethene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02301VL	CFA-MON-003	cis-1,3-Dichloropropene	5	U		UG/L	11/04/2003	SW8260B	F

Field Sample Number	Location	Compound	Sample Result	Result Qualifier	Validation Flag	Sample Units	Date Sample Collected	Method Code	Filtered Metal Sample
4GW02301C1	CFA-MON-003	Cobalt	1.1	U		UG/L	11/04/2003	ILM04.0	F
4GW02301C1	CFA-MON-003	Copper	2.6	B		UG/L	11/04/2003	ILM04.0	F
4GW02301VL	CFA-MON-003	Cyclohexane	5	U		UG/L	11/04/2003	SW8260B	F
4GW02301VL	CFA-MON-003	Dibromochloromethane	5	U		UG/L	11/04/2003	SW8260B	F
4GW02301VL	CFA-MON-003	Dichlorodifluoromethane	10	U		UG/L	11/04/2003	SW8260B	F
4GW02301VL	CFA-MON-003	Ethylbenzene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02301F3	CFA-MON-003	Fluoride	0.199	J		MG/L	11/04/2003	E300	F
4GW02301C1	CFA-MON-003	Iron	229			UG/L	11/04/2003	ILM04.0	F
4GW02301VL	CFA-MON-003	Isobutanol	200	U	R	UG/L	11/04/2003	SW8260B	F
4GW02301VL	CFA-MON-003	Isopropylbenzene	10	U		UG/L	11/04/2003	SW8260B	F
4GW02301C1	CFA-MON-003	Lead	2.8	B	U	UG/L	11/04/2003	ILM04.0	F
4GW02301C1	CFA-MON-003	Magnesium	20400			UG/L	11/04/2003	ILM04.0	F
4GW02301C1	CFA-MON-003	Manganese	4.7	B		UG/L	11/04/2003	ILM04.0	F
4GW02301C1	CFA-MON-003	Mercury	0.03	U	UJ	UG/L	11/04/2003	ILM04.0	F
4GW02301VL	CFA-MON-003	Methyl acetate	25	U	R	UG/L	11/04/2003	SW8260B	F
4GW02301VL	CFA-MON-003	Methyl cyclohexane	5	U		UG/L	11/04/2003	SW8260B	F
4GW02301VL	CFA-MON-003	Methyl t-butyl ether	5	U		UG/L	11/04/2003	SW8260B	F
4GW02301VL	CFA-MON-003	Methylene Chloride	12		UJ	UG/L	11/04/2003	SW8260B	F
4GW02301VL	CFA-MON-003	Naphthalene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02301C1	CFA-MON-003	Nickel	3	U		UG/L	11/04/2003	ILM04.0	F
4GW02301N2	CFA-MON-003	Nitrogen, Nitrate/Nitrite	11.1			MG/L	11/04/2003	E353.1	F
4GW02301C1	CFA-MON-003	Potassium	3450	B		UG/L	11/04/2003	ILM04.0	F
4GW02301C1	CFA-MON-003	Selenium	4.6	U		UG/L	11/04/2003	ILM04.0	F
4GW02301C1	CFA-MON-003	Silver	2	U		UG/L	11/04/2003	ILM04.0	F
4GW02301C1	CFA-MON-003	Sodium	11700			UG/L	11/04/2003	ILM04.0	F
4GW02301VL	CFA-MON-003	Styrene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02301F3	CFA-MON-003	Sulfate	25.1		J	MG/L	11/04/2003	E300	F
4GW02301VL	CFA-MON-003	Tetrachloroethene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02301C1	CFA-MON-003	Thallium	4.1	U		UG/L	11/04/2003	ILM04.0	F
4GW02301VL	CFA-MON-003	Toluene	0.75	J	J	UG/L	11/04/2003	SW8260B	F
4GW02301VL	CFA-MON-003	trans-1,2-Dichloroethene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02301VL	CFA-MON-003	trans-1,3-Dichloropropene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02301VL	CFA-MON-003	Trichloroethene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02301VL	CFA-MON-003	Trichlorofluoromethane	5	U		UG/L	11/04/2003	SW8260B	F
4GW02301C1	CFA-MON-003	Vanadium	6.9	B	U	UG/L	11/04/2003	ILM04.0	F
4GW02301VL	CFA-MON-003	Vinyl Chloride	5	U		UG/L	11/04/2003	SW8260B	F
4GW02301VL	CFA-MON-003	Xylene (Total)	10	U		UG/L	11/04/2003	SW8260B	F
4GW02301C1	CFA-MON-003	Zinc	60.1	E	J	UG/L	11/04/2003	ILM04.0	F
4GW02801VL	FBLK	1,1,1-Trichloroethane	5	U		UG/L	11/05/2003	SW8260B	F
YGW02802VL	FBLK	1,1,1-Trichloroethane	5	U		UG/L	12/18/2003	SW8260B	F
4GW02801VL	FBLK	1,1,2,2-Tetrachloroethane	5	U		UG/L	11/05/2003	SW8260B	F
YGW02802VL	FBLK	1,1,2,2-Tetrachloroethane	5	U		UG/L	12/18/2003	SW8260B	F
4GW02801VL	FBLK	1,1,2-Trichloro-1,2,2-trifluoroethane	5	U		UG/L	11/05/2003	SW8260B	F
YGW02802VL	FBLK	1,1,2-Trichloro-1,2,2-trifluoroethane	5	U		UG/L	12/18/2003	SW8260B	F
4GW02801VL	FBLK	1,1,2-Trichloroethane	5	U		UG/L	11/05/2003	SW8260B	F
YGW02802VL	FBLK	1,1,2-Trichloroethane	5	U		UG/L	12/18/2003	SW8260B	F
4GW02801VL	FBLK	1,1-Dichloroethane	5	U		UG/L	11/05/2003	SW8260B	F
YGW02802VL	FBLK	1,1-Dichloroethane	5	U		UG/L	12/18/2003	SW8260B	F
4GW02801VL	FBLK	1,1-Dichloroethene	5	U		UG/L	11/05/2003	SW8260B	F
YGW02802VL	FBLK	1,1-Dichloroethene	5	U		UG/L	12/18/2003	SW8260B	F
4GW02801VL	FBLK	1,2,4-Trichlorobenzene	5	U		UG/L	11/05/2003	SW8260B	F
YGW02802VL	FBLK	1,2,4-Trichlorobenzene	5	U		UG/L	12/18/2003	SW8260B	F
4GW02801VL	FBLK	1,2,4-Trimethylbenzene	5	U		UG/L	11/05/2003	SW8260B	F
YGW02802VL	FBLK	1,2,4-Trimethylbenzene	5	U		UG/L	12/18/2003	SW8260B	F
4GW02801VL	FBLK	1,2-Dibromo-3-chloropropane	10	U		UG/L	11/05/2003	SW8260B	F
YGW02802VL	FBLK	1,2-Dibromo-3-chloropropane	10	U	UJ	UG/L	12/18/2003	SW8260B	F
4GW02801VL	FBLK	1,2-Dibromoethane	5	U		UG/L	11/05/2003	SW8260B	F
YGW02802VL	FBLK	1,2-Dibromoethane	5	U		UG/L	12/18/2003	SW8260B	F
4GW02801VL	FBLK	1,2-Dichlorobenzene	5	U		UG/L	11/05/2003	SW8260B	F
YGW02802VL	FBLK	1,2-Dichlorobenzene	5	U		UG/L	12/18/2003	SW8260B	F
4GW02801VL	FBLK	1,2-Dichloroethane	5	U		UG/L	11/05/2003	SW8260B	F
YGW02802VL	FBLK	1,2-Dichloroethane	5	U		UG/L	12/18/2003	SW8260B	F
4GW02801VL	FBLK	1,2-Dichloropropane	5	U		UG/L	11/05/2003	SW8260B	F
YGW02802VL	FBLK	1,2-Dichloropropane	5	U		UG/L	12/18/2003	SW8260B	F
4GW02801VL	FBLK	1,3,5-Trimethylbenzene	5	U		UG/L	11/05/2003	SW8260B	F
YGW02802VL	FBLK	1,3,5-Trimethylbenzene	5	U		UG/L	12/18/2003	SW8260B	F
4GW02801VL	FBLK	1,3-Dichlorobenzene	5	U		UG/L	11/05/2003	SW8260B	F
YGW02802VL	FBLK	1,3-Dichlorobenzene	5	U		UG/L	12/18/2003	SW8260B	F
4GW02801VL	FBLK	1,4-Dichlorobenzene	5	U		UG/L	11/05/2003	SW8260B	F
YGW02802VL	FBLK	1,4-Dichlorobenzene	5	U		UG/L	12/18/2003	SW8260B	F
4GW02801VL	FBLK	1,4-Dichlorobenzene	5	U		UG/L	12/18/2003	SW8260B	F

Field Sample Number	Location	Compound	Sample Result	Result Qualifier	Validation Flag	Sample Units	Date Sample Collected	Method Code	Filtered Metal Sample
4GW02801VL	FBLK	2-Butanone	10	U	R	UG/L	11/05/2003	SW8260B	F
YGW02802VL	FBLK	2-Butanone	10	U	UJ	UG/L	12/18/2003	SW8260B	F
4GW02801VL	FBLK	2-Chloroethyl vinyl ether	20	U		UG/L	11/05/2003	SW8260B	F
YGW02802VL	FBLK	2-Chloroethyl vinyl ether	20	U		UG/L	12/18/2003	SW8260B	F
4GW02801VL	FBLK	2-Hexanone	10	U		UG/L	11/05/2003	SW8260B	F
YGW02802VL	FBLK	2-Hexanone	10	U		UG/L	12/18/2003	SW8260B	F
4GW02801VL	FBLK	4-Methyl-2-pentanone	10	U		UG/L	11/05/2003	SW8260B	F
YGW02802VL	FBLK	4-Methyl-2-pentanone	10	U		UG/L	12/18/2003	SW8260B	F
4GW02801VL	FBLK	Acetone	3.9	J	J	UG/L	11/05/2003	SW8260B	F
YGW02802VL	FBLK	Acetone	10	U	UJ	UG/L	12/18/2003	SW8260B	F
4GW02801VL	FBLK	Acetonitrile	50	U	R	UG/L	11/05/2003	SW8260B	F
YGW02802VL	FBLK	Acetonitrile	50	U	R	UG/L	12/18/2003	SW8260B	F
4GW02801A1	FBLK	Alkalinity, Total as CaCO ₃	2.99	J		MG/L	11/05/2003	E310.1	F
4GW02802A1	FBLK	Alkalinity, Total as CaCO ₃	1.93	J		MG/L	12/18/2003	E310.1	F
4GW02801C1	FBLK	Aluminum	70.8	U		UG/L	11/05/2003	ILM04.0	F
4GW02802C1	FBLK	Aluminum	70.8	U		UG/L	12/18/2003	ILM04.0	F
4GW02801C1	FBLK	Antimony	3.5	B		UG/L	11/05/2003	ILM04.0	F
4GW02802C1	FBLK	Antimony	3.3	U		UG/L	12/18/2003	ILM04.0	F
4GW02801C1	FBLK	Arsenic	2.4	U		UG/L	11/05/2003	ILM04.0	F
4GW02802C1	FBLK	Arsenic	2.4	U		UG/L	12/18/2003	ILM04.0	F
4GW02801C1	FBLK	Barium	0.36	U		UG/L	11/05/2003	ILM04.0	F
4GW02802C1	FBLK	Barium	0.71	B		UG/L	12/18/2003	ILM04.0	F
4GW02801VL	FBLK	Benzene	5	U		UG/L	11/05/2003	SW8260B	F
YGW02802VL	FBLK	Benzene	5	U		UG/L	12/18/2003	SW8260B	F
4GW02801C1	FBLK	Beryllium	0.23	U		UG/L	11/05/2003	ILM04.0	F
4GW02802C1	FBLK	Beryllium	0.23	U		UG/L	12/18/2003	ILM04.0	F
4GW02801VL	FBLK	Bromodichloromethane	5	U		UG/L	11/05/2003	SW8260B	F
YGW02802VL	FBLK	Bromodichloromethane	5	U		UG/L	12/18/2003	SW8260B	F
4GW02801VL	FBLK	Bromoform	5	U		UG/L	11/05/2003	SW8260B	F
YGW02802VL	FBLK	Bromoform	5	U		UG/L	12/18/2003	SW8260B	F
4GW02801VL	FBLK	Bromomethane	10	U		UG/L	11/05/2003	SW8260B	F
YGW02802VL	FBLK	Bromomethane	10	U		UG/L	12/18/2003	SW8260B	F
4GW02801C1	FBLK	Cadmium	0.61	U		UG/L	11/05/2003	ILM04.0	F
4GW02802C1	FBLK	Cadmium	0.61	U		UG/L	12/18/2003	ILM04.0	F
4GW02801C1	FBLK	Calcium	71.8	B		UG/L	11/05/2003	ILM04.0	F
4GW02802C1	FBLK	Calcium	80.1	B		UG/L	12/18/2003	ILM04.0	F
4GW02801VL	FBLK	Carbon disulfide	5	U		UG/L	11/05/2003	SW8260B	F
YGW02802VL	FBLK	Carbon disulfide	5	U		UG/L	12/18/2003	SW8260B	F
4GW02801VL	FBLK	Carbon tetrachloride	5	U		UG/L	11/05/2003	SW8260B	F
YGW02802VL	FBLK	Carbon tetrachloride	5	U		UG/L	12/18/2003	SW8260B	F
4GW02801F3	FBLK	Chloride	0	U		MG/L	11/05/2003	E300	F
4GW02802F3	FBLK	Chloride	0.024	U		MG/L	12/18/2003	E300	F
4GW02801VL	FBLK	Chlorobenzene	5	U		UG/L	11/05/2003	SW8260B	F
YGW02802VL	FBLK	Chlorobenzene	5	U		UG/L	12/18/2003	SW8260B	F
4GW02801VL	FBLK	Chloroethane	10	U		UG/L	11/05/2003	SW8260B	F
YGW02802VL	FBLK	Chloroethane	10	U	UJ	UG/L	12/18/2003	SW8260B	F
4GW02801VL	FBLK	Chloroform	5	U		UG/L	11/05/2003	SW8260B	F
YGW02802VL	FBLK	Chloroform	5	U		UG/L	12/18/2003	SW8260B	F
4GW02801VL	FBLK	Chloromethane	10	U		UG/L	11/05/2003	SW8260B	F
YGW02802VL	FBLK	Chloromethane	10	U		UG/L	12/18/2003	SW8260B	F
4GW02801C1	FBLK	Chromium	2.1	U		UG/L	11/05/2003	ILM04.0	F
4GW02802C1	FBLK	Chromium	2.1	U		UG/L	12/18/2003	ILM04.0	F
4GW02801VL	FBLK	cis-1,2-Dichloroethene	5	U		UG/L	11/05/2003	SW8260B	F
YGW02802VL	FBLK	cis-1,2-Dichloroethene	5	U		UG/L	12/18/2003	SW8260B	F
4GW02801VL	FBLK	cis-1,3-Dichloropropene	5	U		UG/L	11/05/2003	SW8260B	F
YGW02802VL	FBLK	cis-1,3-Dichloropropene	5	U		UG/L	12/18/2003	SW8260B	F
4GW02801C1	FBLK	Cobalt	1.1	U		UG/L	11/05/2003	ILM04.0	F
4GW02802C1	FBLK	Cobalt	1.4	B		UG/L	12/18/2003	ILM04.0	F
4GW02801C1	FBLK	Copper	6.1	B		UG/L	11/05/2003	ILM04.0	F
4GW02802C1	FBLK	Copper	16.5	B		UG/L	12/18/2003	ILM04.0	F
4GW02801VL	FBLK	Cyclohexane	5	U		UG/L	11/05/2003	SW8260B	F
YGW02802VL	FBLK	Cyclohexane	5	U		UG/L	12/18/2003	SW8260B	F
4GW02801VL	FBLK	Dibromochloromethane	5	U		UG/L	11/05/2003	SW8260B	F
YGW02802VL	FBLK	Dibromochloromethane	5	U		UG/L	12/18/2003	SW8260B	F
4GW02801VL	FBLK	Dichlorodifluoromethane	10	U		UG/L	11/05/2003	SW8260B	F
YGW02802VL	FBLK	Dichlorodifluoromethane	10	U		UG/L	12/18/2003	SW8260B	F
4GW02801VL	FBLK	Ethylbenzene	5	U		UG/L	11/05/2003	SW8260B	F
YGW02802VL	FBLK	Ethylbenzene	5	U		UG/L	12/18/2003	SW8260B	F
4GW02801F3	FBLK	Fluoride	0	U		MG/L	11/05/2003	E300	F
4GW02802F3	FBLK	Fluoride	0.003	U		MG/L	12/18/2003	E300	F

Field Sample Number	Location	Compound	Sample Result	Result Qualifier	Validation Flag	Sample Units	Date Sample Collected	Method Code	Filtered Metal Sample
4GW02801C1	FBLK	Iron	25.3	U		UG/L	11/05/2003	ILM04.0	F
4GW02802C1	FBLK	Iron	25.3	U		UG/L	12/18/2003	ILM04.0	F
4GW02801VL	FBLK	Isobutanol	200	U	R	UG/L	11/05/2003	SW8260B	F
YGW02802VL	FBLK	Isobutanol	200	U	R	UG/L	12/18/2003	SW8260B	F
4GW02801VL	FBLK	Isopropylbenzene	10	U		UG/L	11/05/2003	SW8260B	F
YGW02802VL	FBLK	Isopropylbenzene	10	U		UG/L	12/18/2003	SW8260B	F
4GW02801C1	FBLK	Lead	2.1	U		UG/L	11/05/2003	ILM04.0	F
4GW02802C1	FBLK	Lead	3.7	U		UG/L	12/18/2003	ILM04.0	F
4GW02801C1	FBLK	Magnesium	12.7	U		UG/L	11/05/2003	ILM04.0	F
4GW02802C1	FBLK	Magnesium	12.7	U		UG/L	12/18/2003	ILM04.0	F
4GW02801C1	FBLK	Manganese	0.76	U		UG/L	11/05/2003	ILM04.0	F
4GW02802C1	FBLK	Manganese	0.97	B		UG/L	12/18/2003	ILM04.0	F
4GW02801C1	FBLK	Mercury	0.03	U	UJ	UG/L	11/05/2003	ILM04.0	F
4GW02802C1	FBLK	Mercury	0.03	U		UG/L	12/18/2003	ILM04.0	F
4GW02801VL	FBLK	Methyl acetate	25	U	R	UG/L	11/05/2003	SW8260B	F
YGW02802VL	FBLK	Methyl acetate	25	U	R	UG/L	12/18/2003	SW8260B	F
4GW02801VL	FBLK	Methyl cyclohexane	5	U		UG/L	11/05/2003	SW8260B	F
YGW02802VL	FBLK	Methyl cyclohexane	5	U		UG/L	12/18/2003	SW8260B	F
4GW02801VL	FBLK	Methyl t-butyl ether	5	U		UG/L	11/05/2003	SW8260B	F
YGW02802VL	FBLK	Methyl t-butyl ether	5	U		UG/L	12/18/2003	SW8260B	F
4GW02801VL	FBLK	Methylene Chloride	18		J	UG/L	11/05/2003	SW8260B	F
YGW02802VL	FBLK	Methylene Chloride	5	U	UJ	UG/L	12/18/2003	SW8260B	F
4GW02801VL	FBLK	Naphthalene	5	U		UG/L	11/05/2003	SW8260B	F
YGW02802VL	FBLK	Naphthalene	5	U		UG/L	12/18/2003	SW8260B	F
4GW02801C1	FBLK	Nickel	3	U		UG/L	11/05/2003	ILM04.0	F
4GW02802C1	FBLK	Nickel	3	U		UG/L	12/18/2003	ILM04.0	F
4GW02801N2	FBLK	Nitrogen, Nitrate/Nitrite	0	U		MG/L	11/05/2003	E353.1	F
4GW02802N2	FBLK	Nitrogen, Nitrate/Nitrite	0.04	J		MG/L	12/18/2003	E353.1	F
4GW02801C1	FBLK	Potassium	22.2	U		UG/L	11/05/2003	ILM04.0	F
4GW02802C1	FBLK	Potassium	27.8	B		UG/L	12/18/2003	ILM04.0	F
4GW02801C1	FBLK	Selenium	4.6	U		UG/L	11/05/2003	ILM04.0	F
4GW02802C1	FBLK	Selenium	4.6	U		UG/L	12/18/2003	ILM04.0	F
4GW02801C1	FBLK	Silver	2	U		UG/L	11/05/2003	ILM04.0	F
4GW02802C1	FBLK	Silver	2	U		UG/L	12/18/2003	ILM04.0	F
4GW02801C1	FBLK	Sodium	49.7	B		UG/L	11/05/2003	ILM04.0	F
4GW02802C1	FBLK	Sodium	32	U		UG/L	12/18/2003	ILM04.0	F
4GW02801VL	FBLK	Styrene	5	U		UG/L	11/05/2003	SW8260B	F
YGW02802VL	FBLK	Styrene	5	U		UG/L	12/18/2003	SW8260B	F
4GW02801F3	FBLK	Sulfate	0	U		MG/L	11/05/2003	E300	F
4GW02802F3	FBLK	Sulfate	0.015	U		MG/L	12/18/2003	E300	F
4GW02801VL	FBLK	Tetrachloroethene	5	U		UG/L	11/05/2003	SW8260B	F
YGW02802VL	FBLK	Tetrachloroethene	5	U		UG/L	12/18/2003	SW8260B	F
4GW02801C1	FBLK	Thallium	4.1	U		UG/L	11/05/2003	ILM04.0	F
4GW02802C1	FBLK	Thallium	4.1	U		UG/L	12/18/2003	ILM04.0	F
4GW02801VL	FBLK	Toluene	5	U		UG/L	11/05/2003	SW8260B	F
YGW02802VL	FBLK	Toluene	5	U		UG/L	12/18/2003	SW8260B	F
4GW02801VL	FBLK	trans-1,2-Dichloroethene	5	U		UG/L	11/05/2003	SW8260B	F
YGW02802VL	FBLK	trans-1,2-Dichloroethene	5	U		UG/L	12/18/2003	SW8260B	F
4GW02801VL	FBLK	trans-1,3-Dichloropropene	5	U		UG/L	11/05/2003	SW8260B	F
YGW02802VL	FBLK	trans-1,3-Dichloropropene	5	U		UG/L	12/18/2003	SW8260B	F
4GW02801VL	FBLK	Trichloroethene	5	U		UG/L	11/05/2003	SW8260B	F
YGW02802VL	FBLK	Trichloroethene	5	U		UG/L	12/18/2003	SW8260B	F
4GW02801VL	FBLK	Trichlorofluoromethane	5	U		UG/L	11/05/2003	SW8260B	F
YGW02802VL	FBLK	Trichlorofluoromethane	5	U		UG/L	12/18/2003	SW8260B	F
4GW02801C1	FBLK	Vanadium	2.5	U		UG/L	11/05/2003	ILM04.0	F
4GW02802C1	FBLK	Vanadium	3	B		UG/L	12/18/2003	ILM04.0	F
4GW02801VL	FBLK	Vinyl Chloride	5	U		UG/L	11/05/2003	SW8260B	F
YGW02802VL	FBLK	Vinyl Chloride	5	U		UG/L	12/18/2003	SW8260B	F
4GW02801VL	FBLK	Xylene (Total)	10	U		UG/L	11/05/2003	SW8260B	F
YGW02802VL	FBLK	Xylene (Total)	10	U		UG/L	12/18/2003	SW8260B	F
4GW02801C1	FBLK	Zinc	8.7	BE	J	UG/L	11/05/2003	ILM04.0	F
4GW02802C1	FBLK	Zinc	19	B		UG/L	12/18/2003	ILM04.0	F
4GW01501VL	LF2-08	1,1,1-Trichloroethane	5	U		UG/L	11/04/2003	SW8260B	F
4GW01501VL	LF2-08	1,1,2,2-Tetrachloroethane	5	U		UG/L	11/04/2003	SW8260B	F
4GW01501VL	LF2-08	1,1,2-Trichloro-1,2,2-trifluoroethane	5	U		UG/L	11/04/2003	SW8260B	F
4GW01501VL	LF2-08	1,1,2-Trichloroethane	5	U		UG/L	11/04/2003	SW8260B	F
4GW01501VL	LF2-08	1,1-Dichloroethane	5	U		UG/L	11/04/2003	SW8260B	F
4GW01501VL	LF2-08	1,1-Dichloroethene	5	U		UG/L	11/04/2003	SW8260B	F
4GW01501VL	LF2-08	1,2,4-Trichlorobenzene	5	U		UG/L	11/04/2003	SW8260B	F
4GW01501VL	LF2-08	1,2,4-Trimethylbenzene	5	U		UG/L	11/04/2003	SW8260B	F

Field Sample Number	Location	Compound	Sample Result	Result Qualifier	Validation Flag	Sample Units	Date Sample Collected	Method Code	Filtered Metal Sample
4GW01501VL	LF2-08	1,2-Dibromo-3-chloropropane	10	U	UJ	UG/L	11/04/2003	SW8260B	F
4GW01501VL	LF2-08	1,2-Dibromoethane	5	U		UG/L	11/04/2003	SW8260B	F
4GW01501VL	LF2-08	1,2-Dichlorobenzene	5	U		UG/L	11/04/2003	SW8260B	F
4GW01501VL	LF2-08	1,2-Dichloroethane	5	U		UG/L	11/04/2003	SW8260B	F
4GW01501VL	LF2-08	1,2-Dichloropropane	5	U		UG/L	11/04/2003	SW8260B	F
4GW01501VL	LF2-08	1,3,5-Trimethylbenzene	5	U		UG/L	11/04/2003	SW8260B	F
4GW01501VL	LF2-08	1,3-Dichlorobenzene	5	U		UG/L	11/04/2003	SW8260B	F
4GW01501VL	LF2-08	1,4-Dichlorobenzene	5	U		UG/L	11/04/2003	SW8260B	F
4GW01501VL	LF2-08	2-Butanone	10	U		UG/L	11/04/2003	SW8260B	F
4GW01501VL	LF2-08	2-Chloroethyl vinyl ether	20	U	UJ	UG/L	11/04/2003	SW8260B	F
4GW01501VL	LF2-08	2-Hexanone	10	U		UG/L	11/04/2003	SW8260B	F
4GW01501VL	LF2-08	4-Methyl-2-pentanone	10	U		UG/L	11/04/2003	SW8260B	F
4GW01501VL	LF2-08	Acetone	10		R	UG/L	11/04/2003	SW8260B	F
4GW01501VL	LF2-08	Acetonitrile	50	U	R	UG/L	11/04/2003	SW8260B	F
4GW01501A1	LF2-08	Alkalinity, Total as CaCO3	130			MG/L	11/04/2003	E310.1	F
4GW01501C1	LF2-08	Aluminum	70.8	U		UG/L	11/04/2003	ILM04.0	F
4GW01501C1	LF2-08	Antimony	3.3	U		UG/L	11/04/2003	ILM04.0	F
4GW01501C1	LF2-08	Arsenic	2.7	B	U	UG/L	11/04/2003	ILM04.0	F
4GW01501C1	LF2-08	Barium	131	B		UG/L	11/04/2003	ILM04.0	F
4GW01501VL	LF2-08	Benzene	5	U		UG/L	11/04/2003	SW8260B	F
4GW01501C1	LF2-08	Beryllium	0.23	U		UG/L	11/04/2003	ILM04.0	F
4GW01501VL	LF2-08	Bromodichloromethane	5	U		UG/L	11/04/2003	SW8260B	F
4GW01501VL	LF2-08	Bromoform	5	U		UG/L	11/04/2003	SW8260B	F
4GW01501VL	LF2-08	Bromomethane	10	U		UG/L	11/04/2003	SW8260B	F
4GW01501C1	LF2-08	Cadmium	0.61	U		UG/L	11/04/2003	ILM04.0	F
4GW01501C1	LF2-08	Calcium	55400			UG/L	11/04/2003	ILM04.0	F
4GW01501VL	LF2-08	Carbon disulfide	5	U		UG/L	11/04/2003	SW8260B	F
4GW01501VL	LF2-08	Carbon tetrachloride	5	U		UG/L	11/04/2003	SW8260B	F
4GW01501F3	LF2-08	Chloride	106		J	MG/L	11/04/2003	E300	F
4GW01501VL	LF2-08	Chlorobenzene	5	U		UG/L	11/04/2003	SW8260B	F
4GW01501VL	LF2-08	Chloroethane	10	U		UG/L	11/04/2003	SW8260B	F
4GW01501VL	LF2-08	Chloroform	5	U		UG/L	11/04/2003	SW8260B	F
4GW01501VL	LF2-08	Chloromethane	10	U		UG/L	11/04/2003	SW8260B	F
4GW01501C1	LF2-08	Chromium	9.1	B		UG/L	11/04/2003	ILM04.0	F
4GW01501VL	LF2-08	cis-1,2-Dichloroethene	5	U		UG/L	11/04/2003	SW8260B	F
4GW01501VL	LF2-08	cis-1,3-Dichloropropene	5	U		UG/L	11/04/2003	SW8260B	F
4GW01501C1	LF2-08	Cobalt	1.1	U		UG/L	11/04/2003	ILM04.0	F
4GW01501C1	LF2-08	Copper	2	U		UG/L	11/04/2003	ILM04.0	F
4GW01501VL	LF2-08	Cyclohexane	5	U		UG/L	11/04/2003	SW8260B	F
4GW01501VL	LF2-08	Dibromochloromethane	5	U		UG/L	11/04/2003	SW8260B	F
4GW01501VL	LF2-08	Dichlorodifluoromethane	10	U		UG/L	11/04/2003	SW8260B	F
4GW01501VL	LF2-08	Ethylbenzene	5	U		UG/L	11/04/2003	SW8260B	F
4GW01501F3	LF2-08	Fluoride	0.211	J		MG/L	11/04/2003	E300	F
4GW01501C1	LF2-08	Iron	277			UG/L	11/04/2003	ILM04.0	F
4GW01501VL	LF2-08	Isobutanol	200	U	R	UG/L	11/04/2003	SW8260B	F
4GW01501VL	LF2-08	Isopropylbenzene	10	U		UG/L	11/04/2003	SW8260B	F
4GW01501C1	LF2-08	Lead	2.1	U		UG/L	11/04/2003	ILM04.0	F
4GW01501C1	LF2-08	Magnesium	15600			UG/L	11/04/2003	ILM04.0	F
4GW01501C1	LF2-08	Manganese	3.1	B		UG/L	11/04/2003	ILM04.0	F
4GW01501C1	LF2-08	Mercury	0.03	U	UJ	UG/L	11/04/2003	ILM04.0	F
4GW01501VL	LF2-08	Methyl acetate	25	U	R	UG/L	11/04/2003	SW8260B	F
4GW01501VL	LF2-08	Methyl cyclohexane	5	U		UG/L	11/04/2003	SW8260B	F
4GW01501VL	LF2-08	Methyl t-butyl ether	5	U		UG/L	11/04/2003	SW8260B	F
4GW01501VL	LF2-08	Methylene Chloride	17		UJ	UG/L	11/04/2003	SW8260B	F
4GW01501VL	LF2-08	Naphthalene	5	U		UG/L	11/04/2003	SW8260B	F
4GW01501C1	LF2-08	Nickel	3	U		UG/L	11/04/2003	ILM04.0	F
4GW01501N2	LF2-08	Nitrogen, Nitrate/Nitrite	3.5			MG/L	11/04/2003	E353.1	F
4GW01501C1	LF2-08	Potassium	5050			UG/L	11/04/2003	ILM04.0	F
4GW01501C1	LF2-08	Selenium	4.6	U		UG/L	11/04/2003	ILM04.0	F
4GW01501C1	LF2-08	Silver	2	U		UG/L	11/04/2003	ILM04.0	F
4GW01501C1	LF2-08	Sodium	43900			UG/L	11/04/2003	ILM04.0	F
4GW01501VL	LF2-08	Styrene	5	U		UG/L	11/04/2003	SW8260B	F
4GW01501F3	LF2-08	Sulfate	31.3		J	MG/L	11/04/2003	E300	F
4GW01501VL	LF2-08	Tetrachloroethene	5	U		UG/L	11/04/2003	SW8260B	F
4GW01501C1	LF2-08	Thallium	4.1	U		UG/L	11/04/2003	ILM04.0	F
4GW01501VL	LF2-08	Toluene	15			UG/L	11/04/2003	SW8260B	F
4GW01501VL	LF2-08	trans-1,2-Dichloroethene	5	U		UG/L	11/04/2003	SW8260B	F
4GW01501VL	LF2-08	trans-1,3-Dichloropropene	5	U		UG/L	11/04/2003	SW8260B	F
4GW01501VL	LF2-08	Trichloroethene	5	U		UG/L	11/04/2003	SW8260B	F
4GW01501VL	LF2-08	Trichlorofluoromethane	5	U		UG/L	11/04/2003	SW8260B	F

Field Sample Number	Location	Compound	Sample Result	Result Qualifier	Validation Flag	Sample Units	Date Sample Collected	Method Code	Filtered Metal Sample
4GW01501C1	LF2-08	Vanadium	4	B	U	UG/L	11/04/2003	ILM04.0	F
4GW01501VL	LF2-08	Vinyl Chloride	5	U		UG/L	11/04/2003	SW8260B	F
4GW01501VL	LF2-08	Xylene (Total)	10	U		UG/L	11/04/2003	SW8260B	F
4GW01501C1	LF2-08	Zinc	13.8	BE	J	UG/L	11/04/2003	ILM04.0	F
4GW01801VL	LF3-08	1,1,1-Trichloroethane	5	U		UG/L	11/04/2003	SW8260B	F
4GW01801VL	LF3-08	1,1,2,2-Tetrachloroethane	5	U		UG/L	11/04/2003	SW8260B	F
4GW01801VL	LF3-08	1,1,2-Trichloro-1,2,2-trifluoroethane	5	U		UG/L	11/04/2003	SW8260B	F
4GW01801VL	LF3-08	1,1,2-Trichloroethane	5	U		UG/L	11/04/2003	SW8260B	F
4GW01801VL	LF3-08	1,1-Dichloroethane	5	U		UG/L	11/04/2003	SW8260B	F
4GW01801VL	LF3-08	1,1-Dichloroethene	5	U		UG/L	11/04/2003	SW8260B	F
4GW01801VL	LF3-08	1,2,4-Trichlorobenzene	5	U		UG/L	11/04/2003	SW8260B	F
4GW01801VL	LF3-08	1,2,4-Trimethylbenzene	5	U		UG/L	11/04/2003	SW8260B	F
4GW01801VL	LF3-08	1,2-Dibromo-3-chloropropane	10	U	UJ	UG/L	11/04/2003	SW8260B	F
4GW01801VL	LF3-08	1,2-Dibromoethane	5	U		UG/L	11/04/2003	SW8260B	F
4GW01801VL	LF3-08	1,2-Dichlorobenzene	5	U		UG/L	11/04/2003	SW8260B	F
4GW01801VL	LF3-08	1,2-Dichloroethane	5	U		UG/L	11/04/2003	SW8260B	F
4GW01801VL	LF3-08	1,2-Dichloropropane	5	U		UG/L	11/04/2003	SW8260B	F
4GW01801VL	LF3-08	1,3,5-Trimethylbenzene	5	U		UG/L	11/04/2003	SW8260B	F
4GW01801VL	LF3-08	1,3-Dichlorobenzene	5	U		UG/L	11/04/2003	SW8260B	F
4GW01801VL	LF3-08	1,4-Dichlorobenzene	5	U		UG/L	11/04/2003	SW8260B	F
4GW01801VL	LF3-08	2-Butanone	10	U		UG/L	11/04/2003	SW8260B	F
4GW01801VL	LF3-08	2-Chloroethyl vinyl ether	20	U	UJ	UG/L	11/04/2003	SW8260B	F
4GW01801VL	LF3-08	2-Hexanone	10	U		UG/L	11/04/2003	SW8260B	F
4GW01801VL	LF3-08	4-Methyl-2-pentanone	10	U		UG/L	11/04/2003	SW8260B	F
4GW01801VL	LF3-08	Acetone	10	U	R	UG/L	11/04/2003	SW8260B	F
4GW01801VL	LF3-08	Acetonitrile	50	U	R	UG/L	11/04/2003	SW8260B	F
4GW01801A1	LF3-08	Alkalinity, Total as CaCO3	140			MG/L	11/04/2003	E310.1	F
4GW01801C1	LF3-08	Aluminum	84.3	B		UG/L	11/04/2003	ILM04.0	F
4GW01801C1	LF3-08	Antimony	3.3	U		UG/L	11/04/2003	ILM04.0	F
4GW01801C1	LF3-08	Arsenic	3.1	B	U	UG/L	11/04/2003	ILM04.0	F
4GW01801C1	LF3-08	Barium	117	B		UG/L	11/04/2003	ILM04.0	F
4GW01801VL	LF3-08	Benzene	5	U		UG/L	11/04/2003	SW8260B	F
4GW01801C1	LF3-08	Beryllium	0.23	U		UG/L	11/04/2003	ILM04.0	F
4GW01801VL	LF3-08	Bromodichloromethane	5	U		UG/L	11/04/2003	SW8260B	F
4GW01801VL	LF3-08	Bromoform	5	U		UG/L	11/04/2003	SW8260B	F
4GW01801VL	LF3-08	Bromomethane	10	U		UG/L	11/04/2003	SW8260B	F
4GW01801C1	LF3-08	Cadmium	0.61	U		UG/L	11/04/2003	ILM04.0	F
4GW01801C1	LF3-08	Calcium	55000			UG/L	11/04/2003	ILM04.0	F
4GW01801VL	LF3-08	Carbon disulfide	5	U		UG/L	11/04/2003	SW8260B	F
4GW01801VL	LF3-08	Carbon tetrachloride	5	U		UG/L	11/04/2003	SW8260B	F
4GW01801F3	LF3-08	Chloride	88.8		J	MG/L	11/04/2003	E300	F
4GW01801VL	LF3-08	Chlorobenzene	5	U		UG/L	11/04/2003	SW8260B	F
4GW01801VL	LF3-08	Chloroethane	10	U		UG/L	11/04/2003	SW8260B	F
4GW01801VL	LF3-08	Chloroform	5	U		UG/L	11/04/2003	SW8260B	F
4GW01801VL	LF3-08	Chloromethane	10	U		UG/L	11/04/2003	SW8260B	F
4GW01801C1	LF3-08	Chromium	10			UG/L	11/04/2003	ILM04.0	F
4GW01801VL	LF3-08	cis-1,2-Dichloroethene	5	U		UG/L	11/04/2003	SW8260B	F
4GW01801VL	LF3-08	cis-1,3-Dichloropropene	5	U		UG/L	11/04/2003	SW8260B	F
4GW01801C1	LF3-08	Cobalt	1.1	U		UG/L	11/04/2003	ILM04.0	F
4GW01801C1	LF3-08	Copper	2	U		UG/L	11/04/2003	ILM04.0	F
4GW01801VL	LF3-08	Cyclohexane	5	U		UG/L	11/04/2003	SW8260B	F
4GW01801VL	LF3-08	Dibromochloromethane	5	U		UG/L	11/04/2003	SW8260B	F
4GW01801VL	LF3-08	Dichlorodifluoromethane	10	U		UG/L	11/04/2003	SW8260B	F
4GW01801VL	LF3-08	Ethylbenzene	5	U		UG/L	11/04/2003	SW8260B	F
4GW01801F3	LF3-08	Fluoride	0.224	J		MG/L	11/04/2003	E300	F
4GW01801C1	LF3-08	Iron	284			UG/L	11/04/2003	ILM04.0	F
4GW01801VL	LF3-08	Isobutanol	200	U	R	UG/L	11/04/2003	SW8260B	F
4GW01801VL	LF3-08	Isopropylbenzene	10	U		UG/L	11/04/2003	SW8260B	F
4GW01801C1	LF3-08	Lead	2.1	U		UG/L	11/04/2003	ILM04.0	F
4GW01801C1	LF3-08	Magnesium	15700			UG/L	11/04/2003	ILM04.0	F
4GW01801C1	LF3-08	Manganese	3.7	B		UG/L	11/04/2003	ILM04.0	F
4GW01801C1	LF3-08	Mercury	0.03	U	UJ	UG/L	11/04/2003	ILM04.0	F
4GW01801VL	LF3-08	Methyl acetate	25	U	R	UG/L	11/04/2003	SW8260B	F
4GW01801VL	LF3-08	Methyl cyclohexane	5	U		UG/L	11/04/2003	SW8260B	F
4GW01801VL	LF3-08	Methyl t-butyl ether	5	U		UG/L	11/04/2003	SW8260B	F
4GW01801VL	LF3-08	Methylene Chloride	8.2		UJ	UG/L	11/04/2003	SW8260B	F
4GW01801VL	LF3-08	Naphthalene	5	U		UG/L	11/04/2003	SW8260B	F
4GW01801C1	LF3-08	Nickel	3	U		UG/L	11/04/2003	ILM04.0	F
4GW01801N2	LF3-08	Nitrogen, Nitrate/Nitrite	2.1			MG/L	11/04/2003	E353.1	F
4GW01801C1	LF3-08	Potassium	4350	B		UG/L	11/04/2003	ILM04.0	F

Field Sample Number	Location	Compound	Sample Result	Result Qualifier	Validation Flag	Sample Units	Date Sample Collected	Method Code	Filtered Metal Sample
4GW01801C1	LF3-08	Selenium	4.6	U		UG/L	11/04/2003	ILM04.0	F
4GW01801C1	LF3-08	Silver	2	U		UG/L	11/04/2003	ILM04.0	F
4GW01801C1	LF3-08	Sodium	41800			UG/L	11/04/2003	ILM04.0	F
4GW01801VL	LF3-08	Styrene	5	U		UG/L	11/04/2003	SW8260B	F
4GW01801F3	LF3-08	Sulfate	31		J	MG/L	11/04/2003	E300	F
4GW01801VL	LF3-08	Tetrachloroethene	5	U		UG/L	11/04/2003	SW8260B	F
4GW01801C1	LF3-08	Thallium	4.1	U		UG/L	11/04/2003	ILM04.0	F
4GW01801VL	LF3-08	Toluene	0.82	J	J	UG/L	11/04/2003	SW8260B	F
4GW01801VL	LF3-08	trans-1,2-Dichloroethene	5	U		UG/L	11/04/2003	SW8260B	F
4GW01801VL	LF3-08	trans-1,3-Dichloropropene	5	U		UG/L	11/04/2003	SW8260B	F
4GW01801VL	LF3-08	Trichloroethene	5	U		UG/L	11/04/2003	SW8260B	F
4GW01801VL	LF3-08	Trichlorofluoromethane	5	U		UG/L	11/04/2003	SW8260B	F
4GW01801C1	LF3-08	Vanadium	5.3	B	U	UG/L	11/04/2003	ILM04.0	F
4GW01801VL	LF3-08	Vinyl Chloride	5	U		UG/L	11/04/2003	SW8260B	F
4GW01801VL	LF3-08	Xylene (Total)	10	U		UG/L	11/04/2003	SW8260B	F
4GW01801C1	LF3-08	Zinc	32	E	J	UG/L	11/04/2003	ILM04.0	F
4GW01901VL	LF3-09	1,1,1-Trichloroethane	5	U		UG/L	11/03/2003	SW8260B	F
4GW01901VL	LF3-09	1,1,2,2-Tetrachloroethane	5	U		UG/L	11/03/2003	SW8260B	F
4GW01901VL	LF3-09	1,1,2-Trichloro-1,2,2-trifluoroethane	5	U		UG/L	11/03/2003	SW8260B	F
4GW01901VL	LF3-09	1,1,2-Trichloroethane	5	U		UG/L	11/03/2003	SW8260B	F
4GW01901VL	LF3-09	1,1-Dichloroethane	5	U		UG/L	11/03/2003	SW8260B	F
4GW01901VL	LF3-09	1,1-Dichloroethene	5	U		UG/L	11/03/2003	SW8260B	F
4GW01901VL	LF3-09	1,2,4-Trichlorobenzene	5	U		UG/L	11/03/2003	SW8260B	F
4GW01901VL	LF3-09	1,2,4-Trimethylbenzene	5	U		UG/L	11/03/2003	SW8260B	F
4GW01901VL	LF3-09	1,2-Dibromo-3-chloropropane	10	U	UJ	UG/L	11/03/2003	SW8260B	F
4GW01901VL	LF3-09	1,2-Dibromoethane	5	U		UG/L	11/03/2003	SW8260B	F
4GW01901VL	LF3-09	1,2-Dichlorobenzene	5	U		UG/L	11/03/2003	SW8260B	F
4GW01901VL	LF3-09	1,2-Dichloroethane	5	U		UG/L	11/03/2003	SW8260B	F
4GW01901VL	LF3-09	1,2-Dichloropropane	5	U		UG/L	11/03/2003	SW8260B	F
4GW01901VL	LF3-09	1,3,5-Trimethylbenzene	5	U		UG/L	11/03/2003	SW8260B	F
4GW01901VL	LF3-09	1,3-Dichlorobenzene	5	U		UG/L	11/03/2003	SW8260B	F
4GW01901VL	LF3-09	1,4-Dichlorobenzene	5	U		UG/L	11/03/2003	SW8260B	F
4GW01901VL	LF3-09	2-Butanone	10	U		UG/L	11/03/2003	SW8260B	F
4GW01901VL	LF3-09	2-Chloroethyl vinyl ether	20	U	UJ	UG/L	11/03/2003	SW8260B	F
4GW01901VL	LF3-09	2-Hexanone	10	U		UG/L	11/03/2003	SW8260B	F
4GW01901VL	LF3-09	4-Methyl-2-pentanone	10	U		UG/L	11/03/2003	SW8260B	F
4GW01901VL	LF3-09	Acetone	10	U	R	UG/L	11/03/2003	SW8260B	F
4GW01901VL	LF3-09	Acetonitrile	50	U	R	UG/L	11/03/2003	SW8260B	F
4GW01901A1	LF3-09	Alkalinity, Total as CaCO3	271			MG/L	11/03/2003	E310.1	F
4GW01901C1	LF3-09	Aluminum	70.8	U		UG/L	11/03/2003	ILM04.0	F
4GW01901C1	LF3-09	Antimony	3.3	U		UG/L	11/03/2003	ILM04.0	F
4GW01901C1	LF3-09	Arsenic	2.4	U		UG/L	11/03/2003	ILM04.0	F
4GW01901C1	LF3-09	Barium	118	B		UG/L	11/03/2003	ILM04.0	F
4GW01901VL	LF3-09	Benzene	5	U		UG/L	11/03/2003	SW8260B	F
4GW01901C1	LF3-09	Beryllium	0.23	U		UG/L	11/03/2003	ILM04.0	F
4GW01901VL	LF3-09	Bromodichloromethane	5	U		UG/L	11/03/2003	SW8260B	F
4GW01901VL	LF3-09	Bromoform	5	U		UG/L	11/03/2003	SW8260B	F
4GW01901VL	LF3-09	Bromomethane	10	U		UG/L	11/03/2003	SW8260B	F
4GW01901C1	LF3-09	Cadmium	0.61	U		UG/L	11/03/2003	ILM04.0	F
4GW01901C1	LF3-09	Calcium	62300			UG/L	11/03/2003	ILM04.0	F
4GW01901VL	LF3-09	Carbon disulfide	5	U		UG/L	11/03/2003	SW8260B	F
4GW01901VL	LF3-09	Carbon tetrachloride	5	U		UG/L	11/03/2003	SW8260B	F
4GW01901F3	LF3-09	Chloride	117		J	MG/L	11/03/2003	E300	F
4GW01901VL	LF3-09	Chlorobenzene	5	U		UG/L	11/03/2003	SW8260B	F
4GW01901VL	LF3-09	Chloroethane	10	U		UG/L	11/03/2003	SW8260B	F
4GW01901VL	LF3-09	Chloroform	5	U		UG/L	11/03/2003	SW8260B	F
4GW01901VL	LF3-09	Chloromethane	10	U		UG/L	11/03/2003	SW8260B	F
4GW01901C1	LF3-09	Chromium	31.5			UG/L	11/03/2003	ILM04.0	F
4GW01901VL	LF3-09	cis-1,2-Dichloroethene	5	U		UG/L	11/03/2003	SW8260B	F
4GW01901VL	LF3-09	cis-1,3-Dichloropropene	5	U		UG/L	11/03/2003	SW8260B	F
4GW01901C1	LF3-09	Cobalt	2.3	B		UG/L	11/03/2003	ILM04.0	F
4GW01901C1	LF3-09	Copper	2	U		UG/L	11/03/2003	ILM04.0	F
4GW01901VL	LF3-09	Cyclohexane	5	U		UG/L	11/03/2003	SW8260B	F
4GW01901VL	LF3-09	Dibromochloromethane	5	U		UG/L	11/03/2003	SW8260B	F
4GW01901VL	LF3-09	Dichlorodifluoromethane	10	U		UG/L	11/03/2003	SW8260B	F
4GW01901VL	LF3-09	Ethylbenzene	5	U		UG/L	11/03/2003	SW8260B	F
4GW01901F3	LF3-09	Fluoride	0.175	J		MG/L	11/03/2003	E300	F
4GW01901C1	LF3-09	Iron	202			UG/L	11/03/2003	ILM04.0	F
4GW01901VL	LF3-09	Isobutanol	200	U	R	UG/L	11/03/2003	SW8260B	F
4GW01901VL	LF3-09	Isopropylbenzene	10	U		UG/L	11/03/2003	SW8260B	F

Field Sample Number	Location	Compound	Sample Result	Result Qualifier	Validation Flag	Sample Units	Date Sample Collected	Method Code	Filtered Metal Sample
4GW01901C1	LF3-09	Lead	2.1	U		UG/L	11/03/2003	ILM04.0	F
4GW01901C1	LF3-09	Magnesium	18600			UG/L	11/03/2003	ILM04.0	F
4GW01901C1	LF3-09	Manganese	19.4			UG/L	11/03/2003	ILM04.0	F
4GW01901C1	LF3-09	Mercury	0.03	U	UJ	UG/L	11/03/2003	ILM04.0	F
4GW01901VL	LF3-09	Methyl acetate	25	U	R	UG/L	11/03/2003	SW8260B	F
4GW01901VL	LF3-09	Methyl cyclohexane	5	U		UG/L	11/03/2003	SW8260B	F
4GW01901VL	LF3-09	Methyl t-butyl ether	5	U		UG/L	11/03/2003	SW8260B	F
4GW01901VL	LF3-09	Methylene Chloride	5	U	UJ	UG/L	11/03/2003	SW8260B	F
4GW01901VL	LF3-09	Naphthalene	5	U		UG/L	11/03/2003	SW8260B	F
4GW01901C1	LF3-09	Nickel	112			UG/L	11/03/2003	ILM04.0	F
4GW01901N2	LF3-09	Nitrogen, Nitrate/Nitrite	2.15			MG/L	11/03/2003	E353.1	F
4GW01901C1	LF3-09	Potassium	4700	B		UG/L	11/03/2003	ILM04.0	F
4GW01901C1	LF3-09	Selenium	4.6	U		UG/L	11/03/2003	ILM04.0	F
4GW01901C1	LF3-09	Silver	2	U		UG/L	11/03/2003	ILM04.0	F
4GW01901C1	LF3-09	Sodium	41100			UG/L	11/03/2003	ILM04.0	F
4GW01901VL	LF3-09	Styrene	5	U		UG/L	11/03/2003	SW8260B	F
4GW01901F3	LF3-09	Sulfate	31.2		J	MG/L	11/03/2003	E300	F
4GW01901VL	LF3-09	Tetrachloroethene	5	U		UG/L	11/03/2003	SW8260B	F
4GW01901C1	LF3-09	Thallium	4.1	U		UG/L	11/03/2003	ILM04.0	F
4GW01901VL	LF3-09	Toluene	5	U		UG/L	11/03/2003	SW8260B	F
4GW01901VL	LF3-09	trans-1,2-Dichloroethene	5	U		UG/L	11/03/2003	SW8260B	F
4GW01901VL	LF3-09	trans-1,3-Dichloropropene	5	U		UG/L	11/03/2003	SW8260B	F
4GW01901VL	LF3-09	Trichloroethene	5	U		UG/L	11/03/2003	SW8260B	F
4GW01901VL	LF3-09	Trichlorofluoromethane	5	U		UG/L	11/03/2003	SW8260B	F
4GW01901C1	LF3-09	Vanadium	4.7	B	U	UG/L	11/03/2003	ILM04.0	F
4GW01901VL	LF3-09	Vinyl Chloride	5	U		UG/L	11/03/2003	SW8260B	F
4GW01901VL	LF3-09	Xylene (Total)	10	U		UG/L	11/03/2003	SW8260B	F
4GW01901C1	LF3-09	Zinc	83	E	J	UG/L	11/03/2003	ILM04.0	F
YGW02002VL	LF3-10	1,1,1-Trichloroethane	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VL	LF3-10	1,1,1-Trichloroethane	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VM	LF3-10	1,1,1-Trichloroethane	5	U		UG/L	12/18/2003	SW8260B	F
YGW02002VL	LF3-10	1,1,2,2-Tetrachloroethane	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VL	LF3-10	1,1,2,2-Tetrachloroethane	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VM	LF3-10	1,1,2-Trichloro-1,2,2-trifluoroethane	5	U		UG/L	12/18/2003	SW8260B	F
YGW02002VL	LF3-10	1,1,2-Trichloro-1,2,2-trifluoroethane	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VM	LF3-10	1,1,2-Trichloro-1,2,2-trifluoroethane	5	U		UG/L	12/18/2003	SW8260B	F
YGW02002VL	LF3-10	1,1,2-Trichloroethane	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VL	LF3-10	1,1,2-Trichloroethane	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VM	LF3-10	1,1,2-Trichloroethane	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VL	LF3-10	1,1,2,2-Tetrachloroethane	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VM	LF3-10	1,1,2,2-Tetrachloroethane	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VL	LF3-10	1,1,2-Trichloro-1,2,2-trifluoroethane	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VM	LF3-10	1,1,2-Trichloro-1,2,2-trifluoroethane	5	U		UG/L	12/18/2003	SW8260B	F
YGW02002VL	LF3-10	1,1,2-Trichloroethane	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VL	LF3-10	1,1,2-Trichloroethane	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VM	LF3-10	1,1,2-Trichloroethane	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VL	LF3-10	1,1-Dichloroethane	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VM	LF3-10	1,1-Dichloroethane	5	U		UG/L	12/18/2003	SW8260B	F
YGW02002VL	LF3-10	1,1-Dichloroethene	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VL	LF3-10	1,1-Dichloroethene	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VM	LF3-10	1,1-Dichloroethene	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VL	LF3-10	1,1-Dichloroethene	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VM	LF3-10	1,1-Dichloroethene	5	U		UG/L	12/18/2003	SW8260B	F
YGW02002VL	LF3-10	1,2,4-Trichlorobenzene	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VL	LF3-10	1,2,4-Trichlorobenzene	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VM	LF3-10	1,2,4-Trichlorobenzene	5	U		UG/L	12/18/2003	SW8260B	F
YGW02002VL	LF3-10	1,2,4,4-Trimethylbenzene	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VL	LF3-10	1,2,4,4-Trimethylbenzene	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VM	LF3-10	1,2,4,4-Trimethylbenzene	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VL	LF3-10	1,2-Dibromo-3-chloropropane	10	U		UG/L	12/18/2003	SW8260B	F
YGW02001VL	LF3-10	1,2-Dibromo-3-chloropropane	10	U		UG/L	12/18/2003	SW8260B	F
YGW02001VM	LF3-10	1,2-Dibromo-3-chloropropane	10	U		UG/L	12/18/2003	SW8260B	F
YGW02002VL	LF3-10	1,2-Dibromoethane	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VL	LF3-10	1,2-Dibromoethane	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VM	LF3-10	1,2-Dibromoethane	5	U		UG/L	12/18/2003	SW8260B	F
YGW02002VL	LF3-10	1,2-Dichlorobenzene	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VL	LF3-10	1,2-Dichlorobenzene	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VM	LF3-10	1,2-Dichlorobenzene	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VL	LF3-10	1,2-Dichlorobenzene	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VM	LF3-10	1,2-Dichlorobenzene	5	U		UG/L	12/18/2003	SW8260B	F
YGW02002VL	LF3-10	1,2-Dichloroethane	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VL	LF3-10	1,2-Dichloroethane	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VM	LF3-10	1,2-Dichloroethane	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VL	LF3-10	1,2-Dichloroethane	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VM	LF3-10	1,2-Dichloroethene	5	U		UG/L	12/18/2003	SW8260B	F
YGW02002VL	LF3-10	1,2-Dichloropropane	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VL	LF3-10	1,2-Dichloropropane	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VM	LF3-10	1,2-Dichloropropane	5	U		UG/L	12/18/2003	SW8260B	F
YGW02002VL	LF3-10	1,3,5-Trimethylbenzene	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VL	LF3-10	1,3,5-Trimethylbenzene	5	U		UG/L	12/18/2003	SW8260B	F

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YGW02001VM	LF3-10	1,3,5-Trimethylbenzene	5	U		UG/L	12/18/2003	SW8260B	F
YGW02002VL	LF3-10	1,3-Dichlorobenzene	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VL	LF3-10	1,3-Dichlorobenzene	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VM	LF3-10	1,3-Dichlorobenzene	5	U		UG/L	12/18/2003	SW8260B	F
YGW02002VL	LF3-10	1,4-Dichlorobenzene	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VL	LF3-10	1,4-Dichlorobenzene	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VM	LF3-10	1,4-Dichlorobenzene	5	U		UG/L	12/18/2003	SW8260B	F
YGW02002VL	LF3-10	2-Butanone	10	U	R	UG/L	12/18/2003	SW8260B	F
YGW02001VL	LF3-10	2-Butanone	10	U		UG/L	12/18/2003	SW8260B	F
YGW02001VM	LF3-10	2-Butanone	10	U	R	UG/L	12/18/2003	SW8260B	F
YGW02002VL	LF3-10	2-Chloroethyl vinyl ether	20	U		UG/L	12/18/2003	SW8260B	F
YGW02001VL	LF3-10	2-Chloroethyl vinyl ether	20	U		UG/L	12/18/2003	SW8260B	F
YGW02001VM	LF3-10	2-Chloroethyl vinyl ether	20	U		UG/L	12/18/2003	SW8260B	F
YGW02002VL	LF3-10	2-Hexanone	10	U		UG/L	12/18/2003	SW8260B	F
YGW02001VL	LF3-10	2-Hexanone	10	U		UG/L	12/18/2003	SW8260B	F
YGW02001VM	LF3-10	2-Hexanone	10	U		UG/L	12/18/2003	SW8260B	F
YGW02002VL	LF3-10	4-Methyl-2-pentanone	10	U		UG/L	12/18/2003	SW8260B	F
YGW02001VL	LF3-10	4-Methyl-2-pentanone	10	U		UG/L	12/18/2003	SW8260B	F
YGW02001VM	LF3-10	4-Methyl-2-pentanone	10	U		UG/L	12/18/2003	SW8260B	F
YGW02002VL	LF3-10	Acetone	10	U	UJ	UG/L	12/18/2003	SW8260B	F
YGW02001VL	LF3-10	Acetone	10	U	UJ	UG/L	12/18/2003	SW8260B	F
YGW02001VM	LF3-10	Acetone	10	U	UJ	UG/L	12/18/2003	SW8260B	F
YGW02002VL	LF3-10	Acetonitrile	50	U	R	UG/L	12/18/2003	SW8260B	F
YGW02001VL	LF3-10	Acetonitrile	50	U	R	UG/L	12/18/2003	SW8260B	F
YGW02001VM	LF3-10	Acetonitrile	50	U	R	UG/L	12/18/2003	SW8260B	F
4GW02002A1	LF3-10	Alkalinity, Total as CaCO3	133			MG/L	12/18/2003	E310.1	F
4GW02001A1	LF3-10	Alkalinity, Total as CaCO3	137			MG/L	12/18/2003	E310.1	F
4GW02002C1	LF3-10	Aluminum	70.8	U		UG/L	12/18/2003	ILM04.0	F
4GW02001C1	LF3-10	Aluminum	70.8	U		UG/L	12/18/2003	ILM04.0	F
4GW02002C1	LF3-10	Antimony	3.3	U		UG/L	12/18/2003	ILM04.0	F
4GW02001C1	LF3-10	Antimony	3.3	U		UG/L	12/18/2003	ILM04.0	F
4GW02002C1	LF3-10	Arsenic	2.4	U		UG/L	12/18/2003	ILM04.0	F
4GW02001C1	LF3-10	Arsenic	2.4	U		UG/L	12/18/2003	ILM04.0	F
4GW02002C1	LF3-10	Barium	107	B		UG/L	12/18/2003	ILM04.0	F
4GW02001C1	LF3-10	Barium	108	B		UG/L	12/18/2003	ILM04.0	F
YGW02002VL	LF3-10	Benzene	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VL	LF3-10	Benzene	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VM	LF3-10	Benzene	5	U		UG/L	12/18/2003	SW8260B	F
4GW02002C1	LF3-10	Beryllium	0.23	U		UG/L	12/18/2003	ILM04.0	F
4GW02001C1	LF3-10	Beryllium	0.23	U		UG/L	12/18/2003	ILM04.0	F
YGW02002VL	LF3-10	Bromodichloromethane	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VL	LF3-10	Bromodichloromethane	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VM	LF3-10	Bromodichloromethane	5	U		UG/L	12/18/2003	SW8260B	F
YGW02002VL	LF3-10	Bromoform	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VL	LF3-10	Bromoform	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VM	LF3-10	Bromoform	5	U		UG/L	12/18/2003	SW8260B	F
YGW02002VL	LF3-10	Bromomethane	10	U		UG/L	12/18/2003	SW8260B	F
YGW02001VL	LF3-10	Bromomethane	10	U		UG/L	12/18/2003	SW8260B	F
YGW02001VM	LF3-10	Bromomethane	10	U		UG/L	12/18/2003	SW8260B	F
4GW02002C1	LF3-10	Cadmium	0.61	U		UG/L	12/18/2003	ILM04.0	F
4GW02001C1	LF3-10	Cadmium	0.61	U		UG/L	12/18/2003	ILM04.0	F
4GW02002C1	LF3-10	Calcium	53600			UG/L	12/18/2003	ILM04.0	F
4GW02001C1	LF3-10	Calcium	53900			UG/L	12/18/2003	ILM04.0	F
YGW02002VL	LF3-10	Carbon disulfide	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VL	LF3-10	Carbon disulfide	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VM	LF3-10	Carbon disulfide	5	U		UG/L	12/18/2003	SW8260B	F
YGW02002VL	LF3-10	Carbon tetrachloride	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VL	LF3-10	Carbon tetrachloride	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VM	LF3-10	Carbon tetrachloride	5	U		UG/L	12/18/2003	SW8260B	F
4GW02002F3	LF3-10	Chloride	58		J	MG/L	12/18/2003	E300	F
4GW02001F3	LF3-10	Chloride	58.8		J	MG/L	12/18/2003	E300	F
YGW02002VL	LF3-10	Chlorobenzene	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VL	LF3-10	Chlorobenzene	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VM	LF3-10	Chlorobenzene	5	U		UG/L	12/18/2003	SW8260B	F
YGW02002VL	LF3-10	Chloroethane	10	U	UJ	UG/L	12/18/2003	SW8260B	F
YGW02001VL	LF3-10	Chloroethane	10	U	UJ	UG/L	12/18/2003	SW8260B	F
YGW02001VM	LF3-10	Chloroethane	10	U	UJ	UG/L	12/18/2003	SW8260B	F
YGW02002VL	LF3-10	Chloroform	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VL	LF3-10	Chloroform	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VM	LF3-10	Chloroform	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VM	LF3-10	Chloroform	5	U		UG/L	12/18/2003	SW8260B	F

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YGW02002VL	LF3-10	Chloromethane	10	U		UG/L	12/18/2003	SW8260B	F
YGW02001VL	LF3-10	Chloromethane	10	U		UG/L	12/18/2003	SW8260B	F
YGW02001VM	LF3-10	Chloromethane	10	U		UG/L	12/18/2003	SW8260B	F
4GW02002C1	LF3-10	Chromium	10	B		UG/L	12/18/2003	ILM04.0	F
4GW02001C1	LF3-10	Chromium	10.6			UG/L	12/18/2003	ILM04.0	F
YGW02002VL	LF3-10	cis-1,2-Dichloroethene	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VL	LF3-10	cis-1,2-Dichloroethene	5	U	R	UG/L	12/18/2003	SW8260B	F
YGW02001VM	LF3-10	cis-1,2-Dichloroethene	5	U		UG/L	12/18/2003	SW8260B	F
YGW02002VL	LF3-10	cis-1,3-Dichloropropene	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VL	LF3-10	cis-1,3-Dichloropropene	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VM	LF3-10	cis-1,3-Dichloropropene	5	U		UG/L	12/18/2003	SW8260B	F
4GW02002C1	LF3-10	Cobalt	1.1	U		UG/L	12/18/2003	ILM04.0	F
4GW02001C1	LF3-10	Cobalt	1.2	B		UG/L	12/18/2003	ILM04.0	F
4GW02002C1	LF3-10	Copper	2	U		UG/L	12/18/2003	ILM04.0	F
4GW02001C1	LF3-10	Copper	2	U		UG/L	12/18/2003	ILM04.0	F
YGW02002VL	LF3-10	Cyclohexane	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VL	LF3-10	Cyclohexane	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VM	LF3-10	Cyclohexane	5	U		UG/L	12/18/2003	SW8260B	F
YGW02002VL	LF3-10	Dibromochloromethane	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VL	LF3-10	Dibromochloromethane	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VM	LF3-10	Dibromochloromethane	5	U		UG/L	12/18/2003	SW8260B	F
YGW02002VL	LF3-10	Dichlorodifluoromethane	10	U		UG/L	12/18/2003	SW8260B	F
YGW02001VL	LF3-10	Dichlorodifluoromethane	10	U		UG/L	12/18/2003	SW8260B	F
YGW02001VM	LF3-10	Dichlorodifluoromethane	10	U		UG/L	12/18/2003	SW8260B	F
YGW02002VL	LF3-10	Ethylbenzene	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VL	LF3-10	Ethylbenzene	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VM	LF3-10	Ethylbenzene	5	U		UG/L	12/18/2003	SW8260B	F
4GW02002F3	LF3-10	Fluoride	0.193	J		MG/L	12/18/2003	E300	F
4GW02001F3	LF3-10	Fluoride	0.21	J		MG/L	12/18/2003	E300	F
4GW02002C1	LF3-10	Iron	25.3	U		UG/L	12/18/2003	ILM04.0	F
4GW02001C1	LF3-10	Iron	25.3	U		UG/L	12/18/2003	ILM04.0	F
YGW02002VL	LF3-10	Isobutanol	200	U	R	UG/L	12/18/2003	SW8260B	F
YGW02001VL	LF3-10	Isobutanol	200	U	R	UG/L	12/18/2003	SW8260B	F
YGW02001VM	LF3-10	Isobutanol	200	U	R	UG/L	12/18/2003	SW8260B	F
YGW02002VL	LF3-10	Isopropylbenzene	10	U		UG/L	12/18/2003	SW8260B	F
YGW02001VL	LF3-10	Isopropylbenzene	10	U		UG/L	12/18/2003	SW8260B	F
YGW02001VM	LF3-10	Isopropylbenzene	10	U		UG/L	12/18/2003	SW8260B	F
4GW02002C1	LF3-10	Lead	2.1	U		UG/L	12/18/2003	ILM04.0	F
4GW02001C1	LF3-10	Lead	2.1	U		UG/L	12/18/2003	ILM04.0	F
4GW02002C1	LF3-10	Magnesium	14200			UG/L	12/18/2003	ILM04.0	F
4GW02001C1	LF3-10	Magnesium	14200			UG/L	12/18/2003	ILM04.0	F
4GW02002C1	LF3-10	Manganese	3.3	B		UG/L	12/18/2003	ILM04.0	F
4GW02001C1	LF3-10	Manganese	3.5	B		UG/L	12/18/2003	ILM04.0	F
4GW02002C1	LF3-10	Mercury	0.03	U		UG/L	12/18/2003	ILM04.0	F
4GW02001C1	LF3-10	Mercury	0.03	U		UG/L	12/18/2003	ILM04.0	F
YGW02002VL	LF3-10	Methyl acetate	25	U	R	UG/L	12/18/2003	SW8260B	F
YGW02001VL	LF3-10	Methyl acetate	25	U	R	UG/L	12/18/2003	SW8260B	F
YGW02001VM	LF3-10	Methyl acetate	25	U	R	UG/L	12/18/2003	SW8260B	F
YGW02002VL	LF3-10	Methyl cyclohexane	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VL	LF3-10	Methyl cyclohexane	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VM	LF3-10	Methyl cyclohexane	5	U		UG/L	12/18/2003	SW8260B	F
YGW02002VL	LF3-10	Methyl t-butyl ether	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VL	LF3-10	Methyl t-butyl ether	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VM	LF3-10	Methyl t-butyl ether	5	U		UG/L	12/18/2003	SW8260B	F
YGW02002VL	LF3-10	Methylene Chloride	5	U	UJ	UG/L	12/18/2003	SW8260B	F
YGW02001VL	LF3-10	Methylene Chloride	5	U	UJ	UG/L	12/18/2003	SW8260B	F
YGW02001VM	LF3-10	Methylene Chloride	5	U	UJ	UG/L	12/18/2003	SW8260B	F
YGW02001VM	LF3-10	m-Xylene & p-Xylene	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VL	LF3-10	Naphthalene	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VM	LF3-10	Naphthalene	5	U		UG/L	12/18/2003	SW8260B	F
4GW02002C1	LF3-10	Nickel	24	B		UG/L	12/18/2003	ILM04.0	F
4GW02001C1	LF3-10	Nickel	22.7	B		UG/L	12/18/2003	ILM04.0	F
4GW02002N2	LF3-10	Nitrogen, Nitrate/Nitrite	2.17			MG/L	12/18/2003	E353.1	F
4GW02001N2	LF3-10	Nitrogen, Nitrate/Nitrite	2.6			MG/L	12/18/2003	E353.1	F
YGW02001VM	LF3-10	o-Xylene	5	U		UG/L	12/18/2003	SW8260B	F
4GW02002C1	LF3-10	Potassium	3630	B		UG/L	12/18/2003	ILM04.0	F
4GW02001C1	LF3-10	Potassium	3650	B		UG/L	12/18/2003	ILM04.0	F
4GW02002C1	LF3-10	Selenium	4.6	U		UG/L	12/18/2003	ILM04.0	F
4GW02001C1	LF3-10	Selenium	4.6	U		UG/L	12/18/2003	ILM04.0	F

Field Sample Number	Location	Compound	Sample Result	Result Qualifier	Validation Flag	Sample Units	Date Sample Collected	Method Code	Filtered Metal Sample
4GW02002C1	LF3-10	Silver	2	U		UG/L	12/18/2003	ILM04.0	F
4GW02001C1	LF3-10	Silver	2	U		UG/L	12/18/2003	ILM04.0	F
4GW02002C1	LF3-10	Sodium	33600			UG/L	12/18/2003	ILM04.0	F
4GW02001C1	LF3-10	Sodium	34300			UG/L	12/18/2003	ILM04.0	F
YGW02002VL	LF3-10	Styrene	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VL	LF3-10	Styrene	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VM	LF3-10	Styrene	5	U		UG/L	12/18/2003	SW8260B	F
4GW02002F3	LF3-10	Sulfate	29.1		J	MG/L	12/18/2003	E300	F
4GW02001F3	LF3-10	Sulfate	29.2		J	MG/L	12/18/2003	E300	F
YGW02002VL	LF3-10	Tetrachloroethene	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VL	LF3-10	Tetrachloroethene	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VM	LF3-10	Tetrachloroethene	5	U		UG/L	12/18/2003	SW8260B	F
4GW02002C1	LF3-10	Thallium	4.1	U		UG/L	12/18/2003	ILM04.0	F
4GW02001C1	LF3-10	Thallium	4.1	U		UG/L	12/18/2003	ILM04.0	F
YGW02002VL	LF3-10	Toluene	1.4	J		UG/L	12/18/2003	SW8260B	F
YGW02001VL	LF3-10	Toluene	1.4	J		UG/L	12/18/2003	SW8260B	F
YGW02001VM	LF3-10	Toluene	1.2	J		UG/L	12/18/2003	SW8260B	F
YGW02002VL	LF3-10	trans-1,2-Dichloroethene	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VL	LF3-10	trans-1,2-Dichloroethene	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VM	LF3-10	trans-1,2-Dichloroethene	5	U		UG/L	12/18/2003	SW8260B	F
YGW02002VL	LF3-10	trans-1,3-Dichloropropene	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VL	LF3-10	trans-1,3-Dichloropropene	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VM	LF3-10	trans-1,3-Dichloropropene	5	U		UG/L	12/18/2003	SW8260B	F
YGW02002VL	LF3-10	Trichloroethene	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VL	LF3-10	Trichloroethene	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VM	LF3-10	Trichloroethene	5	U		UG/L	12/18/2003	SW8260B	F
YGW02002VL	LF3-10	Trichlorofluoromethane	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VL	LF3-10	Trichlorofluoromethane	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VM	LF3-10	Trichlorofluoromethane	5	U		UG/L	12/18/2003	SW8260B	F
4GW02002C1	LF3-10	Vanadium	3.4	B		UG/L	12/18/2003	ILM04.0	F
4GW02001C1	LF3-10	Vanadium	3.3	B		UG/L	12/18/2003	ILM04.0	F
YGW02002VL	LF3-10	Vinyl Chloride	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VL	LF3-10	Vinyl Chloride	5	U		UG/L	12/18/2003	SW8260B	F
YGW02001VM	LF3-10	Vinyl Chloride	5	U		UG/L	12/18/2003	SW8260B	F
YGW02002VL	LF3-10	Xylene (Total)	10	U		UG/L	12/18/2003	SW8260B	F
YGW02001VL	LF3-10	Xylene (Total)	10	U		UG/L	12/18/2003	SW8260B	F
YGW02001VM	LF3-10	Xylene (Total)	10	U		UG/L	12/18/2003	SW8260B	F
4GW02002C1	LF3-10	Zinc	46.5			UG/L	12/18/2003	ILM04.0	F
4GW02001C1	LF3-10	Zinc	43.4			UG/L	12/18/2003	ILM04.0	F
4GW02901VL	RNST	1,1,1-Trichloroethane	5	U		UG/L	11/05/2003	SW8260B	F
YGW02902VL	RNST	1,1,1-Trichloroethane	5	U		UG/L	12/18/2003	SW8260B	F
4GW02901VL	RNST	1,1,2,2-Tetrachloroethane	5	U		UG/L	11/05/2003	SW8260B	F
YGW02902VL	RNST	1,1,2,2-Tetrachloroethane	5	U		UG/L	12/18/2003	SW8260B	F
4GW02901VL	RNST	1,1,2-Trichloro-1,2,2-trifluoroethane	5	U		UG/L	11/05/2003	SW8260B	F
YGW02902VL	RNST	1,1,2-Trichloro-1,2,2-trifluoroethane	5	U		UG/L	12/18/2003	SW8260B	F
4GW02901VL	RNST	1,1,2-Trichloroethane	5	U		UG/L	11/05/2003	SW8260B	F
YGW02902VL	RNST	1,1,2-Trichloroethane	5	U		UG/L	12/18/2003	SW8260B	F
4GW02901VL	RNST	1,1-Dichloroethane	5	U		UG/L	11/05/2003	SW8260B	F
YGW02902VL	RNST	1,1-Dichloroethane	5	U		UG/L	12/18/2003	SW8260B	F
4GW02901VL	RNST	1,1-Dichloroethene	5	U		UG/L	11/05/2003	SW8260B	F
YGW02902VL	RNST	1,1-Dichloroethene	5	U		UG/L	12/18/2003	SW8260B	F
4GW02901VL	RNST	1,2,4-Trichlorobenzene	1.7	J		UG/L	11/05/2003	SW8260B	F
YGW02902VL	RNST	1,2,4-Trichlorobenzene	5	U		UG/L	12/18/2003	SW8260B	F
4GW02901VL	RNST	1,2,4-Trimethylbenzene	5	U		UG/L	11/05/2003	SW8260B	F
YGW02902VL	RNST	1,2,4-Trimethylbenzene	5	U		UG/L	12/18/2003	SW8260B	F
4GW02901VL	RNST	1,2-Dibromo-3-chloropropane	10	U		UG/L	11/05/2003	SW8260B	F
YGW02902VL	RNST	1,2-Dibromo-3-chloropropane	10	U		UG/L	12/18/2003	SW8260B	F
4GW02901VL	RNST	1,2-Dibromoethane	5	U		UG/L	11/05/2003	SW8260B	F
YGW02902VL	RNST	1,2-Dibromoethane	5	U		UG/L	12/18/2003	SW8260B	F
4GW02901VL	RNST	1,2-Dibromoethane	5	U		UG/L	11/05/2003	SW8260B	F
YGW02902VL	RNST	1,2-Dibromoethane	5	U		UG/L	12/18/2003	SW8260B	F
4GW02901VL	RNST	1,2-Dichloropropane	5	U		UG/L	11/05/2003	SW8260B	F
YGW02902VL	RNST	1,2-Dichloropropane	5	U		UG/L	12/18/2003	SW8260B	F
4GW02901VL	RNST	1,3,5-Trimethylbenzene	5	U		UG/L	11/05/2003	SW8260B	F
YGW02902VL	RNST	1,3,5-Trimethylbenzene	5	U		UG/L	12/18/2003	SW8260B	F
4GW02901VL	RNST	1,3-Dichlorobenzene	5	U		UG/L	11/05/2003	SW8260B	F
YGW02902VL	RNST	1,3-Dichlorobenzene	5	U		UG/L	12/18/2003	SW8260B	F
4GW02901VL	RNST	1,4-Dichlorobenzene	0.58	J		UG/L	11/05/2003	SW8260B	F

Field Sample Number	Location	Compound	Sample Result	Result Qualifier	Validation Flag	Sample Units	Date Sample Collected	Method Code	Filtered Metal Sample
YGW02902VL	RNST	1,4-Dichlorobenzene	5	U		UG/L	12/18/2003	SW8260B	F
4GW02901VL	RNST	2-Butanone	10	U		UG/L	11/05/2003	SW8260B	F
YGW02902VL	RNST	2-Butanone	10	U	R	UG/L	12/18/2003	SW8260B	F
4GW02901VL	RNST	2-Chloroethyl vinyl ether	20	U	UJ	UG/L	11/05/2003	SW8260B	F
YGW02902VL	RNST	2-Chloroethyl vinyl ether	20	U		UG/L	12/18/2003	SW8260B	F
4GW02901VL	RNST	2-Hexanone	10	U		UG/L	11/05/2003	SW8260B	F
YGW02902VL	RNST	2-Hexanone	10	U		UG/L	12/18/2003	SW8260B	F
4GW02901VL	RNST	4-Methyl-2-pentanone	10	U		UG/L	11/05/2003	SW8260B	F
YGW02902VL	RNST	4-Methyl-2-pentanone	10	U		UG/L	12/18/2003	SW8260B	F
4GW02901VL	RNST	Acetone	10	U	R	UG/L	11/05/2003	SW8260B	F
YGW02902VL	RNST	Acetone	10	U	UJ	UG/L	12/18/2003	SW8260B	F
4GW02901VL	RNST	Acetonitrile	50	U	R	UG/L	11/05/2003	SW8260B	F
YGW02902VL	RNST	Acetonitrile	50	U	R	UG/L	12/18/2003	SW8260B	F
4GW02901A1	RNST	Alkalinity, Total as CaCO ₃	2.99	J		MG/L	11/05/2003	E310.1	F
4GW02902A1	RNST	Alkalinity, Total as CaCO ₃	1.93	J		MG/L	12/18/2003	E310.1	F
4GW02901C1	RNST	Aluminum	70.8	U		UG/L	11/05/2003	ILM04.0	F
4GW02902C1	RNST	Aluminum	70.8	U		UG/L	12/18/2003	ILM04.0	F
4GW02901C1	RNST	Antimony	3.3	U		UG/L	11/05/2003	ILM04.0	F
4GW02902C1	RNST	Antimony	3.3	U		UG/L	12/18/2003	ILM04.0	F
4GW02901C1	RNST	Arsenic	2.4	U		UG/L	11/05/2003	ILM04.0	F
4GW02902C1	RNST	Arsenic	2.4	U		UG/L	12/18/2003	ILM04.0	F
4GW02901C1	RNST	Barium	0.36	U		UG/L	11/05/2003	ILM04.0	F
4GW02902C1	RNST	Barium	0.36	B	U	UG/L	12/18/2003	ILM04.0	F
4GW02901VL	RNST	Benzene	5	U		UG/L	11/05/2003	SW8260B	F
YGW02902VL	RNST	Benzene	5	U		UG/L	12/18/2003	SW8260B	F
4GW02901C1	RNST	Beryllium	0.23	U		UG/L	11/05/2003	ILM04.0	F
4GW02902C1	RNST	Beryllium	0.23	U		UG/L	12/18/2003	ILM04.0	F
4GW02901VL	RNST	Bromodichloromethane	5	U		UG/L	11/05/2003	SW8260B	F
YGW02902VL	RNST	Bromodichloromethane	5	U		UG/L	12/18/2003	SW8260B	F
4GW02901VL	RNST	Bromoform	5	U		UG/L	11/05/2003	SW8260B	F
YGW02902VL	RNST	Bromoform	5	U		UG/L	12/18/2003	SW8260B	F
4GW02901VL	RNST	Bromomethane	10	U		UG/L	11/05/2003	SW8260B	F
YGW02902VL	RNST	Bromomethane	10	U		UG/L	12/18/2003	SW8260B	F
4GW02901C1	RNST	Cadmium	0.61	U		UG/L	11/05/2003	ILM04.0	F
4GW02902C1	RNST	Cadmium	0.61	U		UG/L	12/18/2003	ILM04.0	F
4GW02901C1	RNST	Calcium	64.8	B	U	UG/L	11/05/2003	ILM04.0	F
4GW02902C1	RNST	Calcium	60.9	B	U	UG/L	12/18/2003	ILM04.0	F
4GW02901VL	RNST	Carbon disulfide	5	U		UG/L	11/05/2003	SW8260B	F
YGW02902VL	RNST	Carbon disulfide	5	U		UG/L	12/18/2003	SW8260B	F
4GW02901VL	RNST	Carbon tetrachloride	5	U		UG/L	11/05/2003	SW8260B	F
YGW02902VL	RNST	Carbon tetrachloride	5	U		UG/L	12/18/2003	SW8260B	F
4GW02901F3	RNST	Chloride	0.373	J	J	MG/L	11/05/2003	E300	F
4GW02902F3	RNST	Chloride	0.022	U		MG/L	12/18/2003	E300	F
4GW02901VL	RNST	Chlorobenzene	5	U		UG/L	11/05/2003	SW8260B	F
YGW02902VL	RNST	Chlorobenzene	5	U		UG/L	12/18/2003	SW8260B	F
4GW02901VL	RNST	Chloroethane	10	U		UG/L	11/05/2003	SW8260B	F
YGW02902VL	RNST	Chloroethane	10	U	UJ	UG/L	12/18/2003	SW8260B	F
4GW02901VL	RNST	Chloroform	5	U		UG/L	11/05/2003	SW8260B	F
YGW02902VL	RNST	Chloroform	5	U		UG/L	12/18/2003	SW8260B	F
4GW02901VL	RNST	Chloromethane	10	U		UG/L	11/05/2003	SW8260B	F
YGW02902VL	RNST	Chloromethane	10	U		UG/L	12/18/2003	SW8260B	F
4GW02901C1	RNST	Chromium	2.1	U		UG/L	11/05/2003	ILM04.0	F
4GW02902C1	RNST	Chromium	2.1	U		UG/L	12/18/2003	ILM04.0	F
4GW02901VL	RNST	cis-1,2-Dichloroethene	5	U		UG/L	11/05/2003	SW8260B	F
YGW02902VL	RNST	cis-1,2-Dichloroethene	5	U		UG/L	12/18/2003	SW8260B	F
4GW02901VL	RNST	cis-1,3-Dichloropropene	5	U		UG/L	11/05/2003	SW8260B	F
YGW02902VL	RNST	cis-1,3-Dichloropropene	5	U		UG/L	12/18/2003	SW8260B	F
4GW02901C1	RNST	Cobalt	1.1	U		UG/L	11/05/2003	ILM04.0	F
4GW02902C1	RNST	Cobalt	1.1	U		UG/L	12/18/2003	ILM04.0	F
4GW02901C1	RNST	Copper	24.4	B		UG/L	11/05/2003	ILM04.0	F
4GW02902C1	RNST	Copper	17.8	B		UG/L	12/18/2003	ILM04.0	F
4GW02901VL	RNST	Cyclohexane	5	U		UG/L	11/05/2003	SW8260B	F
YGW02902VL	RNST	Cyclohexane	5	U		UG/L	12/18/2003	SW8260B	F
4GW02901VL	RNST	Dibromochloromethane	5	U		UG/L	11/05/2003	SW8260B	F
YGW02902VL	RNST	Dibromochloromethane	5	U		UG/L	12/18/2003	SW8260B	F
4GW02901VL	RNST	Dichlorodifluoromethane	10	U		UG/L	11/05/2003	SW8260B	F
YGW02902VL	RNST	Dichlorodifluoromethane	10	U		UG/L	12/18/2003	SW8260B	F
4GW02901VL	RNST	Ethylbenzene	5	U		UG/L	11/05/2003	SW8260B	F
YGW02902VL	RNST	Ethylbenzene	5	U		UG/L	12/18/2003	SW8260B	F
4GW02901F3	RNST	Fluoride	0	U		MG/L	11/05/2003	E300	F

Field Sample Number	Location	Compound	Sample Result	Result Qualifier	Validation Flag	Sample Units	Date Sample Collected	Method Code	Filtered Metal Sample
4GW02902F3	RNST	Fluoride	0.002	U		MG/L	12/18/2003	E300	F
4GW02901C1	RNST	Iron	25.3	U		UG/L	11/05/2003	ILM04.0	F
4GW02902C1	RNST	Iron	25.3	U		UG/L	12/18/2003	ILM04.0	F
4GW02901VL	RNST	Isobutanol	200	U	R	UG/L	11/05/2003	SW8260B	F
YGW02902VL	RNST	Isobutanol	200	U	R	UG/L	12/18/2003	SW8260B	F
4GW02901VL	RNST	Isopropylbenzene	10	U		UG/L	11/05/2003	SW8260B	F
YGW02902VL	RNST	Isopropylbenzene	10	U		UG/L	12/18/2003	SW8260B	F
4GW02901C1	RNST	Lead	3.5		U	UG/L	11/05/2003	ILM04.0	F
4GW02902C1	RNST	Lead	3.3			UG/L	12/18/2003	ILM04.0	F
4GW02901C1	RNST	Magnesium	12.7	U		UG/L	11/05/2003	ILM04.0	F
4GW02902C1	RNST	Magnesium	12.7	U		UG/L	12/18/2003	ILM04.0	F
4GW02901C1	RNST	Manganese	0.76	U		UG/L	11/05/2003	ILM04.0	F
4GW02902C1	RNST	Manganese	0.76	U		UG/L	12/18/2003	ILM04.0	F
4GW02901C1	RNST	Mercury	0.03	U	UJ	UG/L	11/05/2003	ILM04.0	F
4GW02902C1	RNST	Mercury	0.03	U		UG/L	12/18/2003	ILM04.0	F
4GW02901VL	RNST	Methyl acetate	25	U	R	UG/L	11/05/2003	SW8260B	F
YGW02902VL	RNST	Methyl acetate	25	U	R	UG/L	12/18/2003	SW8260B	F
4GW02901VL	RNST	Methyl cyclohexane	5	U		UG/L	11/05/2003	SW8260B	F
YGW02902VL	RNST	Methyl cyclohexane	5	U		UG/L	12/18/2003	SW8260B	F
4GW02901VL	RNST	Methyl t-butyl ether	5	U		UG/L	11/05/2003	SW8260B	F
YGW02902VL	RNST	Methyl t-butyl ether	5	U		UG/L	12/18/2003	SW8260B	F
4GW02901VL	RNST	Methylene Chloride	5	U	UJ	UG/L	11/05/2003	SW8260B	F
YGW02902VL	RNST	Methylene Chloride	5	U	UJ	UG/L	12/18/2003	SW8260B	F
4GW02901VL	RNST	Naphthalene	2.1	J	J	UG/L	11/05/2003	SW8260B	F
YGW02902VL	RNST	Naphthalene	5	U		UG/L	12/18/2003	SW8260B	F
4GW02901C1	RNST	Nickel	3	U		UG/L	11/05/2003	ILM04.0	F
4GW02902C1	RNST	Nickel	3	U		UG/L	12/18/2003	ILM04.0	F
4GW02901N2	RNST	Nitrogen, Nitrate/Nitrite	0	U		MG/L	11/05/2003	E353.1	F
4GW02902N2	RNST	Nitrogen, Nitrate/Nitrite	306			MG/L	12/18/2003	E353.1	F
4GW02901C1	RNST	Potassium	22.2	U		UG/L	11/05/2003	ILM04.0	F
4GW02902C1	RNST	Potassium	22.2	U		UG/L	12/18/2003	ILM04.0	F
4GW02901C1	RNST	Selenium	4.6	U		UG/L	11/05/2003	ILM04.0	F
4GW02902C1	RNST	Selenium	4.6	U		UG/L	12/18/2003	ILM04.0	F
4GW02901C1	RNST	Silver	2	U		UG/L	11/05/2003	ILM04.0	F
4GW02902C1	RNST	Silver	2	U		UG/L	12/18/2003	ILM04.0	F
4GW02901C1	RNST	Sodium	244	B		UG/L	11/05/2003	ILM04.0	F
4GW02902C1	RNST	Sodium	315	B		UG/L	12/18/2003	ILM04.0	F
4GW02901VL	RNST	Styrene	5	U		UG/L	11/05/2003	SW8260B	F
YGW02902VL	RNST	Styrene	5	U		UG/L	12/18/2003	SW8260B	F
4GW02901F3	RNST	Sulfate	0	U		MG/L	11/05/2003	E300	F
4GW02902F3	RNST	Sulfate	0.027	U		MG/L	12/18/2003	E300	F
4GW02901VL	RNST	Tetrachloroethene	5	U		UG/L	11/05/2003	SW8260B	F
YGW02902VL	RNST	Tetrachloroethene	5	U		UG/L	12/18/2003	SW8260B	F
4GW02901C1	RNST	Thallium	4.1	U		UG/L	11/05/2003	ILM04.0	F
4GW02902C1	RNST	Thallium	4.1	U		UG/L	12/18/2003	ILM04.0	F
4GW02901VL	RNST	Toluene	5	U		UG/L	11/05/2003	SW8260B	F
YGW02902VL	RNST	Toluene	5	U		UG/L	12/18/2003	SW8260B	F
4GW02901VL	RNST	trans-1,2-Dichloroethene	5	U		UG/L	11/05/2003	SW8260B	F
YGW02902VL	RNST	trans-1,2-Dichloroethene	5	U		UG/L	12/18/2003	SW8260B	F
4GW02901VL	RNST	trans-1,3-Dichloropropene	5	U		UG/L	11/05/2003	SW8260B	F
YGW02902VL	RNST	trans-1,3-Dichloropropene	5	U		UG/L	12/18/2003	SW8260B	F
4GW02901VL	RNST	Trichloroethene	5	U		UG/L	11/05/2003	SW8260B	F
YGW02902VL	RNST	Trichloroethene	5	U		UG/L	12/18/2003	SW8260B	F
4GW02901VL	RNST	Trichlorofluoromethane	5	U		UG/L	11/05/2003	SW8260B	F
YGW02902VL	RNST	Trichlorofluoromethane	5	U		UG/L	12/18/2003	SW8260B	F
4GW02901C1	RNST	Vanadium	2.5	U		UG/L	11/05/2003	ILM04.0	F
4GW02902C1	RNST	Vanadium	2.5	U		UG/L	12/18/2003	ILM04.0	F
4GW02901VL	RNST	Vinyl Chloride	5	U		UG/L	11/05/2003	SW8260B	F
YGW02902VL	RNST	Vinyl Chloride	5	U		UG/L	12/18/2003	SW8260B	F
4GW02901VL	RNST	Xylene (Total)	10	U		UG/L	11/05/2003	SW8260B	F
YGW02902VL	RNST	Xylene (Total)	10	U		UG/L	12/18/2003	SW8260B	F
4GW02901C1	RNST	Zinc	19.1	BE	J	UG/L	11/05/2003	ILM04.0	F
4GW02902C1	RNST	Zinc	13.6	B		UG/L	12/18/2003	ILM04.0	F
4GW02601VL	TBLK	1,1,1-Trichloroethane	5	U		UG/L	11/04/2003	SW8260B	F
4GW02701VL	TBLK	1,1,1-Trichloroethane	5	U		UG/L	11/03/2003	SW8260B	F
YGW02602VL	TBLK	1,1,1-Trichloroethane	5	U		UG/L	12/18/2003	SW8260B	F
4GW02601VL	TBLK	1,1,2,2-Tetrachloroethane	5	U		UG/L	11/04/2003	SW8260B	F
4GW02701VL	TBLK	1,1,2,2-Tetrachloroethane	5	U		UG/L	11/03/2003	SW8260B	F
YGW02602VL	TBLK	1,1,2,2-Tetrachloroethane	5	U		UG/L	12/18/2003	SW8260B	F
4GW02601VL	TBLK	1,1,2-Trichloro-1,2,2-trifluoroethane	5	U		UG/L	11/04/2003	SW8260B	F

Field Sample Number	Location	Compound	Sample Result	Result Qualifier	Validation Flag	Sample Units	Date Collected	Method Code	Filtered Metal Sample
4GW02701VL	TBLK	1,1,2-Trichloro-1,2,2-trifluoroethane	5	U		UG/L	11/03/2003	SW8260B	F
YGW02602VL	TBLK	1,1,2-Trichloro-1,2,2-trifluoroethane	5	U		UG/L	12/18/2003	SW8260B	F
4GW02601VL	TBLK	1,1,2-Trichloroethane	5	U		UG/L	11/04/2003	SW8260B	F
4GW02701VL	TBLK	1,1,2-Trichloroethane	5	U		UG/L	11/03/2003	SW8260B	F
YGW02602VL	TBLK	1,1,2-Trichloroethane	5	U		UG/L	12/18/2003	SW8260B	F
4GW02601VL	TBLK	1,1-Dichloroethane	5	U		UG/L	11/04/2003	SW8260B	F
4GW02701VL	TBLK	1,1-Dichloroethane	5	U		UG/L	11/03/2003	SW8260B	F
YGW02602VL	TBLK	1,1-Dichloroethane	5	U		UG/L	12/18/2003	SW8260B	F
4GW02601VL	TBLK	1,1-Dichloroethene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02701VL	TBLK	1,1-Dichloroethene	5	U		UG/L	11/03/2003	SW8260B	F
YGW02602VL	TBLK	1,1-Dichloroethene	5	U		UG/L	12/18/2003	SW8260B	F
4GW02601VL	TBLK	1,2,4-Trichlorobenzene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02701VL	TBLK	1,2,4-Trichlorobenzene	1.5	J	J	UG/L	11/03/2003	SW8260B	F
YGW02602VL	TBLK	1,2,4-Trichlorobenzene	5	U		UG/L	12/18/2003	SW8260B	F
4GW02601VL	TBLK	1,2,4-Trimethylbenzene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02701VL	TBLK	1,2,4-Trimethylbenzene	5	U		UG/L	11/03/2003	SW8260B	F
YGW02602VL	TBLK	1,2,4-Trimethylbenzene	5	U		UG/L	12/18/2003	SW8260B	F
4GW02601VL	TBLK	1,2-Dibromo-3-chloropropane	10	U	UJ	UG/L	11/04/2003	SW8260B	F
4GW02701VL	TBLK	1,2-Dibromo-3-chloropropane	10	U	UJ	UG/L	11/03/2003	SW8260B	F
YGW02602VL	TBLK	1,2-Dibromo-3-chloropropane	10	U		UG/L	12/18/2003	SW8260B	F
4GW02601VL	TBLK	1,2-Dibromoethane	5	U		UG/L	11/04/2003	SW8260B	F
4GW02701VL	TBLK	1,2-Dibromoethane	5	U		UG/L	11/03/2003	SW8260B	F
YGW02602VL	TBLK	1,2-Dibromoethane	5	U		UG/L	12/18/2003	SW8260B	F
4GW02601VL	TBLK	1,2-Dichlorobenzene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02701VL	TBLK	1,2-Dichlorobenzene	5	U		UG/L	11/03/2003	SW8260B	F
YGW02602VL	TBLK	1,2-Dichlorobenzene	5	U		UG/L	12/18/2003	SW8260B	F
4GW02601VL	TBLK	1,2-Dichloroethane	5	U		UG/L	11/04/2003	SW8260B	F
4GW02701VL	TBLK	1,2-Dichloroethane	5	U		UG/L	11/03/2003	SW8260B	F
YGW02602VL	TBLK	1,2-Dichloroethane	5	U		UG/L	12/18/2003	SW8260B	F
4GW02601VL	TBLK	1,2-Dichloropropane	5	U		UG/L	11/04/2003	SW8260B	F
4GW02701VL	TBLK	1,2-Dichloropropane	5	U		UG/L	11/03/2003	SW8260B	F
YGW02602VL	TBLK	1,2-Dichloropropane	5	U		UG/L	12/18/2003	SW8260B	F
4GW02601VL	TBLK	1,3,5-Trimethylbenzene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02701VL	TBLK	1,3,5-Trimethylbenzene	5	U		UG/L	11/03/2003	SW8260B	F
YGW02602VL	TBLK	1,3,5-Trimethylbenzene	5	U		UG/L	12/18/2003	SW8260B	F
4GW02601VL	TBLK	1,3-Dichlorobenzene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02701VL	TBLK	1,3-Dichlorobenzene	5	U		UG/L	11/03/2003	SW8260B	F
YGW02602VL	TBLK	1,3-Dichlorobenzene	5	U		UG/L	12/18/2003	SW8260B	F
4GW02601VL	TBLK	1,4-Dichlorobenzene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02701VL	TBLK	1,4-Dichlorobenzene	0.55	J	J	UG/L	11/03/2003	SW8260B	F
YGW02602VL	TBLK	1,4-Dichlorobenzene	5	U		UG/L	12/18/2003	SW8260B	F
4GW02601VL	TBLK	2-Butanone	10	U		UG/L	11/04/2003	SW8260B	F
4GW02701VL	TBLK	2-Butanone	10	U	R	UG/L	11/03/2003	SW8260B	F
YGW02602VL	TBLK	2-Chloroethyl vinyl ether	20	U	UJ	UG/L	11/04/2003	SW8260B	F
4GW02701VL	TBLK	2-Chloroethyl vinyl ether	20	U	UJ	UG/L	11/03/2003	SW8260B	F
YGW02602VL	TBLK	2-Chloroethyl vinyl ether	20	U		UG/L	12/18/2003	SW8260B	F
4GW02601VL	TBLK	2-Hexanone	10	U		UG/L	11/04/2003	SW8260B	F
4GW02701VL	TBLK	2-Hexanone	10	U		UG/L	11/03/2003	SW8260B	F
YGW02602VL	TBLK	2-Hexanone	10	U		UG/L	12/18/2003	SW8260B	F
4GW02601VL	TBLK	4-Methyl-2-pentanone	10	U		UG/L	11/04/2003	SW8260B	F
4GW02701VL	TBLK	4-Methyl-2-pentanone	10	U		UG/L	11/03/2003	SW8260B	F
YGW02602VL	TBLK	4-Methyl-2-pentanone	10	U		UG/L	12/18/2003	SW8260B	F
4GW02601VL	TBLK	Acetone	10	U	R	UG/L	11/04/2003	SW8260B	F
4GW02701VL	TBLK	Acetone	10	U	R	UG/L	11/03/2003	SW8260B	F
YGW02602VL	TBLK	Acetone	10	U	UJ	UG/L	12/18/2003	SW8260B	F
4GW02601VL	TBLK	Acetonitrile	50	U	R	UG/L	11/04/2003	SW8260B	F
4GW02701VL	TBLK	Acetonitrile	50	U	R	UG/L	11/03/2003	SW8260B	F
YGW02602VL	TBLK	Acetonitrile	50	U	R	UG/L	12/18/2003	SW8260B	F
4GW02601VL	TBLK	Benzene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02701VL	TBLK	Benzene	5	U		UG/L	11/03/2003	SW8260B	F
YGW02602VL	TBLK	Benzene	5	U		UG/L	12/18/2003	SW8260B	F
4GW02601VL	TBLK	Bromodichloromethane	5	U		UG/L	11/04/2003	SW8260B	F
4GW02701VL	TBLK	Bromodichloromethane	5	U		UG/L	11/03/2003	SW8260B	F
YGW02602VL	TBLK	Bromodichloromethane	5	U		UG/L	12/18/2003	SW8260B	F
4GW02601VL	TBLK	Bromoform	5	U		UG/L	11/04/2003	SW8260B	F
4GW02701VL	TBLK	Bromoform	5	U		UG/L	11/03/2003	SW8260B	F
YGW02602VL	TBLK	Bromoform	5	U		UG/L	12/18/2003	SW8260B	F
4GW02601VL	TBLK	Bromomethane	10	U		UG/L	11/04/2003	SW8260B	F
4GW02701VL	TBLK	Bromomethane	10	U		UG/L	11/03/2003	SW8260B	F

Field Sample Number	Location	Compound	Sample Result	Result Qualifier	Validation Flag	Sample Units	Date Sample Collected	Method Code	Filtered Metal Sample
YGW02602VL	TBLK	Bromomethane	10	U		UG/L	12/18/2003	SW8260B	F
4GW02601VL	TBLK	Carbon disulfide	5	U		UG/L	11/04/2003	SW8260B	F
4GW02701VL	TBLK	Carbon disulfide	5	U		UG/L	11/03/2003	SW8260B	F
YGW02602VL	TBLK	Carbon disulfide	5	U		UG/L	12/18/2003	SW8260B	F
4GW02601VL	TBLK	Carbon tetrachloride	5	U		UG/L	11/04/2003	SW8260B	F
4GW02701VL	TBLK	Carbon tetrachloride	5	U		UG/L	11/03/2003	SW8260B	F
YGW02602VL	TBLK	Carbon tetrachloride	5	U		UG/L	12/18/2003	SW8260B	F
4GW02601VL	TBLK	Chlorobenzene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02701VL	TBLK	Chlorobenzene	5	U		UG/L	11/03/2003	SW8260B	F
YGW02602VL	TBLK	Chlorobenzene	5	U		UG/L	12/18/2003	SW8260B	F
4GW02601VL	TBLK	Chloroethane	10	U		UG/L	11/04/2003	SW8260B	F
4GW02701VL	TBLK	Chloroethane	10	U		UG/L	11/03/2003	SW8260B	F
YGW02602VL	TBLK	Chloroethane	10	U	UJ	UG/L	12/18/2003	SW8260B	F
4GW02601VL	TBLK	Chloroform	5	U		UG/L	11/04/2003	SW8260B	F
4GW02701VL	TBLK	Chloroform	5	U		UG/L	11/03/2003	SW8260B	F
YGW02602VL	TBLK	Chloroform	5	U		UG/L	12/18/2003	SW8260B	F
4GW02601VL	TBLK	Chloromethane	10	U		UG/L	11/04/2003	SW8260B	F
4GW02701VL	TBLK	Chloromethane	10	U		UG/L	11/03/2003	SW8260B	F
YGW02602VL	TBLK	Chloromethane	10	U		UG/L	12/18/2003	SW8260B	F
4GW02601VL	TBLK	cis-1,2-Dichloroethene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02701VL	TBLK	cis-1,2-Dichloroethene	5	U		UG/L	11/03/2003	SW8260B	F
YGW02602VL	TBLK	cis-1,2-Dichloroethene	5	U		UG/L	12/18/2003	SW8260B	F
4GW02601VL	TBLK	cis-1,3-Dichloropropene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02701VL	TBLK	cis-1,3-Dichloropropene	5	U		UG/L	11/03/2003	SW8260B	F
YGW02602VL	TBLK	cis-1,3-Dichloropropene	5	U		UG/L	12/18/2003	SW8260B	F
4GW02601VL	TBLK	Cyclohexane	5	U		UG/L	11/04/2003	SW8260B	F
4GW02701VL	TBLK	Cyclohexane	5	U		UG/L	11/03/2003	SW8260B	F
YGW02602VL	TBLK	Cyclohexane	5	U		UG/L	12/18/2003	SW8260B	F
4GW02601VL	TBLK	Dibromochloromethane	5	U		UG/L	11/04/2003	SW8260B	F
4GW02701VL	TBLK	Dibromochloromethane	5	U		UG/L	11/03/2003	SW8260B	F
YGW02602VL	TBLK	Dibromochloromethane	5	U		UG/L	12/18/2003	SW8260B	F
4GW02601VL	TBLK	Dichlorodifluoromethane	10	U		UG/L	11/04/2003	SW8260B	F
4GW02701VL	TBLK	Dichlorodifluoromethane	10	U		UG/L	11/03/2003	SW8260B	F
YGW02602VL	TBLK	Dichlorodifluoromethane	10	U		UG/L	12/18/2003	SW8260B	F
4GW02601VL	TBLK	Ethylbenzene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02701VL	TBLK	Ethylbenzene	5	U		UG/L	11/03/2003	SW8260B	F
YGW02602VL	TBLK	Ethylbenzene	5	U		UG/L	12/18/2003	SW8260B	F
4GW02601VL	TBLK	Isobutanol	200	U	R	UG/L	11/04/2003	SW8260B	F
4GW02701VL	TBLK	Isobutanol	200	U	R	UG/L	11/03/2003	SW8260B	F
YGW02602VL	TBLK	Isobutanol	200	U	R	UG/L	12/18/2003	SW8260B	F
4GW02601VL	TBLK	Isopropylbenzene	10	U		UG/L	11/04/2003	SW8260B	F
4GW02701VL	TBLK	Isopropylbenzene	10	U		UG/L	11/03/2003	SW8260B	F
YGW02602VL	TBLK	Isopropylbenzene	10	U		UG/L	12/18/2003	SW8260B	F
4GW02601VL	TBLK	Methyl acetate	25	U	R	UG/L	11/04/2003	SW8260B	F
4GW02701VL	TBLK	Methyl acetate	25	U	R	UG/L	11/03/2003	SW8260B	F
YGW02602VL	TBLK	Methyl acetate	25	U	R	UG/L	12/18/2003	SW8260B	F
4GW02601VL	TBLK	Methyl cyclohexane	5	U		UG/L	11/04/2003	SW8260B	F
4GW02701VL	TBLK	Methyl cyclohexane	5	U		UG/L	11/03/2003	SW8260B	F
YGW02602VL	TBLK	Methyl cyclohexane	5	U		UG/L	12/18/2003	SW8260B	F
4GW02601VL	TBLK	Methyl t-butyl ether	5	U		UG/L	11/04/2003	SW8260B	F
4GW02701VL	TBLK	Methyl t-butyl ether	5	U		UG/L	11/03/2003	SW8260B	F
YGW02602VL	TBLK	Methyl t-butyl ether	5	U		UG/L	12/18/2003	SW8260B	F
4GW02601VL	TBLK	Methylene Chloride	5	U	UJ	UG/L	11/04/2003	SW8260B	F
4GW02701VL	TBLK	Methylene Chloride	5	U	UJ	UG/L	11/03/2003	SW8260B	F
YGW02602VL	TBLK	Methylene Chloride	5	U	UJ	UG/L	12/18/2003	SW8260B	F
4GW02601VL	TBLK	Naphthalene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02701VL	TBLK	Naphthalene	1.8	J	J	UG/L	11/03/2003	SW8260B	F
YGW02602VL	TBLK	Naphthalene	5	U		UG/L	12/18/2003	SW8260B	F
4GW02601VL	TBLK	Styrene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02701VL	TBLK	Styrene	5	U		UG/L	11/03/2003	SW8260B	F
YGW02602VL	TBLK	Styrene	5	U		UG/L	12/18/2003	SW8260B	F
4GW02601VL	TBLK	Tetrachloroethene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02701VL	TBLK	Tetrachloroethene	5	U		UG/L	11/03/2003	SW8260B	F
YGW02602VL	TBLK	Tetrachloroethene	5	U		UG/L	12/18/2003	SW8260B	F
4GW02601VL	TBLK	Toluene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02701VL	TBLK	Toluene	5	U		UG/L	11/03/2003	SW8260B	F
YGW02602VL	TBLK	Toluene	5	U		UG/L	12/18/2003	SW8260B	F
4GW02601VL	TBLK	trans-1,2-Dichloroethene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02701VL	TBLK	trans-1,2-Dichloroethene	5	U		UG/L	11/03/2003	SW8260B	F
YGW02602VL	TBLK	trans-1,2-Dichloroethene	5	U		UG/L	12/18/2003	SW8260B	F

Field Sample Number	Location	Compound	Sample Result	Result Qualifier	Validation Flag	Sample Units	Date Sample Collected	Method Code	Filtered Metal Sample
4GW02601VL	TBLK	trans-1,3-Dichloropropene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02701VL	TBLK	trans-1,3-Dichloropropene	5	U		UG/L	11/03/2003	SW8260B	F
YGW02602VL	TBLK	trans-1,3-Dichloropropene	5	U		UG/L	12/18/2003	SW8260B	F
4GW02601VL	TBLK	Trichloroethene	5	U		UG/L	11/04/2003	SW8260B	F
4GW02701VL	TBLK	Trichloroethene	5	U		UG/L	11/03/2003	SW8260B	F
YGW02602VL	TBLK	Trichloroethene	5	U		UG/L	12/18/2003	SW8260B	F
4GW02601VL	TBLK	Trichlorofluoromethane	5	U		UG/L	11/04/2003	SW8260B	F
4GW02701VL	TBLK	Trichlorofluoromethane	5	U		UG/L	11/03/2003	SW8260B	F
YGW02602VL	TBLK	Trichlorofluoromethane	5	U		UG/L	12/18/2003	SW8260B	F
4GW02601VL	TBLK	Vinyl Chloride	5	U		UG/L	11/04/2003	SW8260B	F
4GW02701VL	TBLK	Vinyl Chloride	5	U		UG/L	11/03/2003	SW8260B	F
YGW02602VL	TBLK	Vinyl Chloride	5	U		UG/L	12/18/2003	SW8260B	F
4GW02601VL	TBLK	Xylene (Total)	10	U		UG/L	11/04/2003	SW8260B	F
4GW02701VL	TBLK	Xylene (Total)	10	U		UG/L	11/03/2003	SW8260B	F
YGW02602VL	TBLK	Xylene (Total)	10	U		UG/L	12/18/2003	SW8260B	F
4GW02401VM	USGS-083	1,1,1-Trichloroethane	5	U		UG/L	11/05/2003	SW8260B	F
4GW02401VM	USGS-083	1,1,2,2-Tetrachloroethane	5	U		UG/L	11/05/2003	SW8260B	F
4GW02401VM	USGS-083	1,1,2-Trichloro-1,2,2-trifluoroethane	5	U		UG/L	11/05/2003	SW8260B	F
4GW02401VM	USGS-083	1,1,2-Trichloroethane	5	U		UG/L	11/05/2003	SW8260B	F
4GW02401VM	USGS-083	1,1-Dichloroethane	5	U		UG/L	11/05/2003	SW8260B	F
4GW02401VM	USGS-083	1,1-Dichloroethene	5	U		UG/L	11/05/2003	SW8260B	F
4GW02401VM	USGS-083	1,2,4-Trichlorobenzene	5	U		UG/L	11/05/2003	SW8260B	F
4GW02401VM	USGS-083	1,2,4-Trimethylbenzene	5	U		UG/L	11/05/2003	SW8260B	F
4GW02401VM	USGS-083	1,2-Dibromo-3-chloropropane	10	U		UG/L	11/05/2003	SW8260B	F
4GW02401VM	USGS-083	1,2-Dibromoethane	5	U		UG/L	11/05/2003	SW8260B	F
4GW02401VM	USGS-083	1,2-Dichlorobenzene	5	U		UG/L	11/05/2003	SW8260B	F
4GW02401VM	USGS-083	1,2-Dichloroethane	5	U		UG/L	11/05/2003	SW8260B	F
4GW02401VM	USGS-083	1,2-Dichloropropane	5	U		UG/L	11/05/2003	SW8260B	F
4GW02401VM	USGS-083	1,3,5-Trimethylbenzene	5	U		UG/L	11/05/2003	SW8260B	F
4GW02401VM	USGS-083	1,3-Dichlorobenzene	5	U		UG/L	11/05/2003	SW8260B	F
4GW02401VM	USGS-083	1,4-Dichlorobenzene	5	U		UG/L	11/05/2003	SW8260B	F
4GW02401VM	USGS-083	2-Butanone	10	U		UG/L	11/05/2003	SW8260B	F
4GW02401VM	USGS-083	2-Chloroethyl vinyl ether	20	U		UG/L	11/05/2003	SW8260B	F
4GW02401VM	USGS-083	2-Hexanone	10	U		UG/L	11/05/2003	SW8260B	F
4GW02401VM	USGS-083	4-Methyl-2-pentanone	10	U		UG/L	11/05/2003	SW8260B	F
4GW02401VM	USGS-083	Acetone	10	U	R	UG/L	11/05/2003	SW8260B	F
4GW02401VM	USGS-083	Acetonitrile	50	U	R	UG/L	11/05/2003	SW8260B	F
4GW02401A1	USGS-083	Alkalinity, Total as CaCO3	200			MG/L	11/05/2003	E310.1	F
4GW02401C1	USGS-083	Aluminum	70.8	U		UG/L	11/05/2003	ILM04.0	F
4GW02401C1	USGS-083	Antimony	3.3	U		UG/L	11/05/2003	ILM04.0	F
4GW02401C1	USGS-083	Arsenic	2.9	B		UG/L	11/05/2003	ILM04.0	F
4GW02401C1	USGS-083	Barium	28.3	B		UG/L	11/05/2003	ILM04.0	F
4GW02401VM	USGS-083	Benzene	5	U		UG/L	11/05/2003	SW8260B	F
4GW02401C1	USGS-083	Beryllium	0.23	U		UG/L	11/05/2003	ILM04.0	F
4GW02401VM	USGS-083	Bromodichloromethane	5	U		UG/L	11/05/2003	SW8260B	F
4GW02401VM	USGS-083	Bromoform	5	U		UG/L	11/05/2003	SW8260B	F
4GW02401VM	USGS-083	Bromomethane	10	U		UG/L	11/05/2003	SW8260B	F
4GW02401C1	USGS-083	Cadmium	0.61	U		UG/L	11/05/2003	ILM04.0	F
4GW02401C1	USGS-083	Calcium	26800			UG/L	11/05/2003	ILM04.0	F
4GW02401VM	USGS-083	Carbon disulfide	5	U		UG/L	11/05/2003	SW8260B	F
4GW02401VM	USGS-083	Carbon tetrachloride	5	U		UG/L	11/05/2003	SW8260B	F
4GW02401F3	USGS-083	Chloride	12		J	MG/L	11/05/2003	E300	F
4GW02401VM	USGS-083	Chlorobenzene	5	U		UG/L	11/05/2003	SW8260B	F
4GW02401VM	USGS-083	Chloroethane	10	U		UG/L	11/05/2003	SW8260B	F
4GW02401VM	USGS-083	Chloroform	5	U		UG/L	11/05/2003	SW8260B	F
4GW02401VM	USGS-083	Chloromethane	10	U		UG/L	11/05/2003	SW8260B	F
4GW02401C1	USGS-083	Chromium	13.8			UG/L	11/05/2003	ILM04.0	F
4GW02401VM	USGS-083	cis-1,2-Dichloroethene	5	U		UG/L	11/05/2003	SW8260B	F
4GW02401VM	USGS-083	cis-1,3-Dichloropropene	5	U		UG/L	11/05/2003	SW8260B	F
4GW02401C1	USGS-083	Cobalt	1.1	U		UG/L	11/05/2003	ILM04.0	F
4GW02401C1	USGS-083	Copper	2	U		UG/L	11/05/2003	ILM04.0	F
4GW02401VM	USGS-083	Cyclohexane	5	U		UG/L	11/05/2003	SW8260B	F
4GW02401VM	USGS-083	Dibromochloromethane	5	U		UG/L	11/05/2003	SW8260B	F
4GW02401VM	USGS-083	Dichlorodifluoromethane	10	U		UG/L	11/05/2003	SW8260B	F
4GW02401VM	USGS-083	Ethylbenzene	5	U		UG/L	11/05/2003	SW8260B	F
4GW02401F3	USGS-083	Fluoride	0.235	J		MG/L	11/05/2003	E300	F
4GW02401C1	USGS-083	Iron	25.3	U		UG/L	11/05/2003	ILM04.0	F
4GW02401VM	USGS-083	Isobutanol	200	U		UG/L	11/05/2003	SW8260B	F
4GW02401VM	USGS-083	Isopropylbenzene	10	U		UG/L	11/05/2003	SW8260B	F
4GW02401C1	USGS-083	Lead	2.1	U		UG/L	11/05/2003	ILM04.0	F

Field Sample Number	Location	Compound	Sample Result	Result Qualifier	Validation Flag	Sample Units	Date Sample Collected	Method Code	Filtered Metal Sample	
4GW02401C1	USGS-083	Magnesium	10900	U		UG/L	11/05/2003	ILM04.0	F	
4GW02401C1	USGS-083	Manganese	0.76	U		UG/L	11/05/2003	ILM04.0	F	
4GW02401C1	USGS-083	Mercury	0.03	U	UJ	UG/L	11/05/2003	ILM04.0	F	
4GW02401VM	USGS-083	Methyl acetate	25	U	R	UG/L	11/05/2003	SW8260B	F	
4GW02401VM	USGS-083	Methyl cyclohexane	5	U		UG/L	11/05/2003	SW8260B	F	
4GW02401VM	USGS-083	Methyl t-butyl ether	5	U		UG/L	11/05/2003	SW8260B	F	
4GW02401VM	USGS-083	Methylene Chloride	5	U	UJ	UG/L	11/05/2003	SW8260B	F	
4GW02401VM	USGS-083	Naphthalene	5	U		UG/L	11/05/2003	SW8260B	F	
4GW02401C1	USGS-083	Nickel	3	U		UG/L	11/05/2003	ILM04.0	F	
4GW02401N2	USGS-083	Nitrogen, Nitrate/Nitrite	0.74			MG/L	11/05/2003	E353.1	F	
4GW02401C1	USGS-083	Potassium	2660	B		UG/L	11/05/2003	ILM04.0	F	
4GW02401C1	USGS-083	Selenium	4.6	U		UG/L	11/05/2003	ILM04.0	F	
4GW02401C1	USGS-083	Silver	2	U		UG/L	11/05/2003	ILM04.0	F	
4GW02401C1	USGS-083	Sodium	10100			UG/L	11/05/2003	ILM04.0	F	
4GW02401VM	USGS-083	Styrene	5	U		UG/L	11/05/2003	SW8260B	F	
4GW02401F3	USGS-083	Sulfate	21.7		J	MG/L	11/05/2003	E300	F	
4GW02401VM	USGS-083	Tetrachloroethene	5	U		UG/L	11/05/2003	SW8260B	F	
4GW02401C1	USGS-083	Thallium	4.1	U		UG/L	11/05/2003	ILM04.0	F	
4GW02401VM	USGS-083	Toluene	5	U		UG/L	11/05/2003	SW8260B	F	
4GW02401VM	USGS-083	trans-1,2-Dichloroethene	5	U		UG/L	11/05/2003	SW8260B	F	
4GW02401VM	USGS-083	trans-1,3-Dichloropropene	5	U		UG/L	11/05/2003	SW8260B	F	
4GW02401VM	USGS-083	Trichloroethene	5	U		UG/L	11/05/2003	SW8260B	F	
4GW02401VM	USGS-083	Trichlorofluoromethane	5	U		UG/L	11/05/2003	SW8260B	F	
4GW02401C1	USGS-083	Vanadium	9.9	B		UG/L	11/05/2003	ILM04.0	F	
4GW02401VM	USGS-083	Vinyl Chloride	5	U		UG/L	11/05/2003	SW8260B	F	
4GW02401VM	USGS-083	Xylene (Total)	10	U		UG/L	11/05/2003	SW8260B	F	
4GW02401C1	USGS-083	Zinc	151	E	J	UG/L	11/05/2003	ILM04.0	F	
4GW02501VL	USGS-128	1,1,1-Trichloroethane	5	U		UG/L	11/05/2003	SW8260B	F	
4GW02501VL	USGS-128	1,1,2,2-Tetrachloroethane	5	U		UG/L	11/05/2003	SW8260B	F	
4GW02501VL	USGS-128	1,1,2-Trichloro-1,2,2-trifluoroethane	5	U		UG/L	11/05/2003	SW8260B	F	
4GW02501VL	USGS-128	1,1,2-Trichloroethane	5	U		UG/L	11/05/2003	SW8260B	F	
4GW02501VL	USGS-128	1,1-Dichloroethane	5	U		UG/L	11/05/2003	SW8260B	F	
4GW02501VL	USGS-128	1,1,2,4-Trichlorobenzene	5	U		UG/L	11/05/2003	SW8260B	F	
4GW02501VL	USGS-128	1,2,4-Trimethylbenzene	5	U		UG/L	11/05/2003	SW8260B	F	
4GW02501VL	USGS-128	1,2-Dibromo-3-chloropropane	10	U		UG/L	11/05/2003	SW8260B	F	
4GW02501VL	USGS-128	1,2-Dibromoethane	5	U		UG/L	11/05/2003	SW8260B	F	
4GW02501VL	USGS-128	1,2-Dichlorobenzene	5	U		UG/L	11/05/2003	SW8260B	F	
4GW02501VL	USGS-128	1,2-Dichloroethane	5	U		UG/L	11/05/2003	SW8260B	F	
4GW02501VL	USGS-128	1,2-Dichloropropane	5	U		UG/L	11/05/2003	SW8260B	F	
4GW02501VL	USGS-128	1,3,5-Trimethylbenzene	5	U		UG/L	11/05/2003	SW8260B	F	
4GW02501VL	USGS-128	1,3-Dichlorobenzene	5	U		UG/L	11/05/2003	SW8260B	F	
4GW02501VL	USGS-128	1,4-Dichlorobenzene	5	U		UG/L	11/05/2003	SW8260B	F	
4GW02501VL	USGS-128	2-Butanone	10	U		UG/L	11/05/2003	SW8260B	F	
4GW02501VL	USGS-128	2-Chloroethyl vinyl ether	20	U		UG/L	11/05/2003	SW8260B	F	
4GW02501VL	USGS-128	2-Hexanone	10	U		UG/L	11/05/2003	SW8260B	F	
4GW02501VL	USGS-128	4-Methyl-2-pentanone	10	U		UG/L	11/05/2003	SW8260B	F	
4GW02501VL	USGS-128	Acetone	10	U		UG/L	11/05/2003	SW8260B	F	
4GW02501VL	USGS-128	Acetonitrile	50	U		UG/L	11/05/2003	SW8260B	F	
4GW02501A1	USGS-128	Alkalinity, Total as CaCO3	317			MG/L	11/05/2003	E310.1	F	
4GW02501C1	USGS-128	Aluminum	70.8	U		UG/L	11/05/2003	ILM04.0	F	
4GW02501C1	USGS-128	Antimony	3.3	U		UG/L	11/05/2003	ILM04.0	F	
4GW02501C1	USGS-128	Arsenic	2.4	U		UG/L	11/05/2003	ILM04.0	F	
4GW02501C1	USGS-128	Barium	82.5	B		UG/L	11/05/2003	ILM04.0	F	
4GW02501VL	USGS-128	Benzene	5	U		UG/L	11/05/2003	SW8260B	F	
4GW02501C1	USGS-128	Beryllium	0.23	U		UG/L	11/05/2003	ILM04.0	F	
4GW02501VL	USGS-128	Bromodichloromethane	5	U		UG/L	11/05/2003	SW8260B	F	
4GW02501VL	USGS-128	Bromoform	5	U		UG/L	11/05/2003	SW8260B	F	
4GW02501VL	USGS-128	Bromomethane	10	U		UG/L	11/05/2003	SW8260B	F	
4GW02501C1	USGS-128	Cadmium	0.61	U		UG/L	11/05/2003	ILM04.0	F	
4GW02501C1	USGS-128	Calcium	48700			UG/L	11/05/2003	ILM04.0	F	
4GW02501VL	USGS-128	Carbon disulfide	5	U		UG/L	11/05/2003	SW8260B	F	
4GW02501VL	USGS-128	Carbon tetrachloride	5	U		UG/L	11/05/2003	SW8260B	F	
4GW02501F3	USGS-128	Chloride	23.6			J	MG/L	11/05/2003	E300	F
4GW02501VL	USGS-128	Chlorobenzene	5	U		UG/L	11/05/2003	SW8260B	F	
4GW02501VL	USGS-128	Chloroethane	10	U		UG/L	11/05/2003	SW8260B	F	
4GW02501VL	USGS-128	Chloroform	5	U		UG/L	11/05/2003	SW8260B	F	
4GW02501VL	USGS-128	Chloromethane	10	U		UG/L	11/05/2003	SW8260B	F	
4GW02501C1	USGS-128	Chromium	19.2			UG/L	11/05/2003	ILM04.0	F	
4GW02501VL	USGS-128	cis-1,2-Dichloroethene	5	U		UG/L	11/05/2003	SW8260B	F	

Field Sample Number	Location	Compound	Sample Result	Result Qualifier	Validation Flag	Sample Units	Date Sample Collected	Method Code	Filtered Metal Sample
4GW02501VL	USGS-128	cis-1,3-Dichloropropene	5	U		UG/L	11/05/2003	SW8260B	F
4GW02501C1	USGS-128	Cobalt	1.1	U		UG/L	11/05/2003	ILM04.0	F
4GW02501C1	USGS-128	Copper	7.8	B		UG/L	11/05/2003	ILM04.0	F
4GW02501VL	USGS-128	Cyclohexane	5	U		UG/L	11/05/2003	SW8260B	F
4GW02501VL	USGS-128	Dibromochloromethane	5	U		UG/L	11/05/2003	SW8260B	F
4GW02501VL	USGS-128	Dichlorodifluoromethane	10	U		UG/L	11/05/2003	SW8260B	F
4GW02501VL	USGS-128	Ethylbenzene	5	U		UG/L	11/05/2003	SW8260B	F
4GW02501F3	USGS-128	Fluoride	0.214	J		MG/L	11/05/2003	E300	F
4GW02501C1	USGS-128	Iron	1950			UG/L	11/05/2003	ILM04.0	F
4GW02501VL	USGS-128	Isobutanol	200	U	R	UG/L	11/05/2003	SW8260B	F
4GW02501VL	USGS-128	Isopropylbenzene	10	U		UG/L	11/05/2003	SW8260B	F
4GW02501C1	USGS-128	Lead	11.9		U	UG/L	11/05/2003	ILM04.0	F
4GW02501C1	USGS-128	Magnesium	13100			UG/L	11/05/2003	ILM04.0	F
4GW02501C1	USGS-128	Manganese	20.1			UG/L	11/05/2003	ILM04.0	F
4GW02501C1	USGS-128	Mercury	0.03	U	UJ	UG/L	11/05/2003	ILM04.0	F
4GW02501VL	USGS-128	Methyl acetate	25	U	R	UG/L	11/05/2003	SW8260B	F
4GW02501VL	USGS-128	Methyl cyclohexane	5	U		UG/L	11/05/2003	SW8260B	F
4GW02501VL	USGS-128	Methyl t-butyl ether	5	U		UG/L	11/05/2003	SW8260B	F
4GW02501VL	USGS-128	Methylene Chloride	9.1		UJ	UG/L	11/05/2003	SW8260B	F
4GW02501VL	USGS-128	Naphthalene	5	U		UG/L	11/05/2003	SW8260B	F
4GW02501C1	USGS-128	Nickel	3.3	B		UG/L	11/05/2003	ILM04.0	F
4GW02501N2	USGS-128	Nitrogen, Nitrate/Nitrite	1.17			MG/L	11/05/2003	E353.1	F
4GW02501C1	USGS-128	Potassium	2730	B		UG/L	11/05/2003	ILM04.0	F
4GW02501C1	USGS-128	Selenium	4.6	U		UG/L	11/05/2003	ILM04.0	F
4GW02501C1	USGS-128	Silver	2	U		UG/L	11/05/2003	ILM04.0	F
4GW02501C1	USGS-128	Sodium	16500			UG/L	11/05/2003	ILM04.0	F
4GW02501VL	USGS-128	Styrene	5	U		UG/L	11/05/2003	SW8260B	F
4GW02501F3	USGS-128	Sulfate	36.2		J	MG/L	11/05/2003	E300	F
4GW02501VL	USGS-128	Tetrachloroethene	5	U		UG/L	11/05/2003	SW8260B	F
4GW02501C1	USGS-128	Thallium	4.1	U		UG/L	11/05/2003	ILM04.0	F
4GW02501VL	USGS-128	Toluene	5	U		UG/L	11/05/2003	SW8260B	F
4GW02501VL	USGS-128	trans-1,2-Dichloroethene	5	U		UG/L	11/05/2003	SW8260B	F
4GW02501VL	USGS-128	trans-1,3-Dichloropropene	5	U		UG/L	11/05/2003	SW8260B	F
4GW02501VL	USGS-128	Trichloroethene	5	U		UG/L	11/05/2003	SW8260B	F
4GW02501VL	USGS-128	Trichlorofluoromethane	5	U		UG/L	11/05/2003	SW8260B	F
4GW02501C1	USGS-128	Vanadium	4.4	B	U	UG/L	11/05/2003	ILM04.0	F
4GW02501VL	USGS-128	Vinyl Chloride	5	U		UG/L	11/05/2003	SW8260B	F
4GW02501VL	USGS-128	Xylene (Total)	10	U		UG/L	11/05/2003	SW8260B	F
4GW02501C1	USGS-128	Zinc	958	E	J	UG/L	11/05/2003	ILM04.0	F

Appendix B

CFA Landfill Moisture Monitoring (October 2002 to October 2003)

Appendix B

CFA Landfill Moisture Monitoring (October 2002 to October 2003)

B-1. INTRODUCTION

This appendix presents the analysis of neutron-probe and time-domain-reflectometry (TDR) data used to monitor soil-moisture content at Central Facilities Area (CFA) Landfills I, II, and III. The data from the deep or vertical time-domain reflectometer systems that were installed in the native soil cover at Landfills II and III to a depth of 8 ft are reported and discussed. Moisture monitoring data from five existing neutron-probe access tubes (NATs) are also addressed.

The terms *infiltration*, *recharge*, and *drainage* are used throughout this appendix and are defined as follows. Water that moves into the soil is defined as *infiltration*. Water that continues to move downward beyond the evapotranspiration (ET) depth and out of the soil profile is termed *recharge*. Infiltration and recharge are represented by an increase in water storage within a system. In addition to recharge, ET is a large contributor to decreasing storage in near-surface soils, moving water upward and out of the soil. The term *drainage* refers to water movement out of a unit thickness of soil or a decrease in soil moisture but does not indicate the direction of movement.

B-2. NEUTRON-PROBE MOISTURE MONITORING DATA

The goal for the neutron probe monitoring at the landfills is to determine the volume of water infiltrating past the ET or rooting depth. Water that passes through the ET depth might pick up contaminants in the landfill waste and carry them to groundwater. The volumes for infiltration, drainage, and recharge have been calculated for each landfill NAT location from October 2002 to October 2003. The raw data for the five neutron probe monitoring locations are provided in Tables B-1 through B-5. Calculated infiltration, recharge, and drainage for the five NAT locations are summarized in Section 4 of the main report.

B-3.1 Infiltration and Recharge Estimates Using Neutron-Probe Access Tube Data

The calculations of moisture content and volumetric water content are described below. Methods for estimating infiltration and recharge are also described.

The infiltration and recharge for 2003 were estimated by calculating the change in water storage using the following calibration equations:

$$MC = 0.000808 \times \text{counts}, \text{ for sand and gravel} \quad (\text{B-1})$$

$$MC = 0.00166 \times \text{counts} + 4.74, \text{ for clay} \quad (\text{B-2})$$

where:

MC = moisture content.

The mass water content was converted to a volumetric water content by multiplying the mass water content by the soil bulk density value, determined for samples collected from the boreholes adjacent to the NATs (Ansley et al. 1988). The equations to calculate volumetric water content (Vol) are:

$$\text{Vol} = \text{MC} \times 1.98, \text{ for sand and gravel.} \quad (\text{B-3})$$

$$\text{Vol} = \text{MC} \times 1.69, \text{ for clay.} \quad (\text{B-4})$$

The calibration curves were assigned to 1-ft increments of the NATs based on lithology logs for boreholes drilled next to the tubes located off the landfills (Table B-6). For the NATs located on the landfills, 1-ft increments with count rates less than 5,500 were assigned to the sand and gravel calibration curve, and those with count rates greater than 5,500 were assigned to the clay calibration.

The only measurable infiltration that penetrated beyond the first foot occurred in the spring of 2003, as shown in the TDR data discussed below. Consequently, infiltration and recharge were calculated for the spring, and these calculations also reflect recharge for the entire year. Unlike previous years, there was no distinct snowmelt event. Based on the change in storage using the calibration calculations and the assumed ET depth, the estimates of recharge for 2003 are less than 0.25 in. for all locations (Table B-7). The recharge at the background location, LF 2-04, near Landfill II was also less than 0.25 in. Infiltration calculations for the five NATs for the spring of 2003 ranged from 0.3 to 0.89 in. The highest amount of infiltration occurred at LF 3-03, which is located on the edge of Landfill III. Vertical profiles for the NATs show that the spring infiltration did not penetrate beyond the first 3 ft (Figures B-1 through B-5).

The measured precipitation at the CFA National Oceanic and Atmospheric Administration (NOAA) weather station of 1.06 in. is higher than the infiltration estimates of 0.3 to 0.89 in. for the NATs. The measured precipitation includes the period from December 2002 until April 2003 (Table B-8). The infiltration estimates were lower than the amount of precipitation, because, unlike most years, snow did not accumulate during the winter and then melt suddenly.

B-3.2 Water Storage Analysis for Neutron-Probe Data

Changes in storage refer to changes in soil moisture content over a period that represents a full moisture cycle (typically one year). Changes in storage at the NAT locations for the period of October 2002 to October 2003 indicate that the moisture content decreased over the length of the NAT tubes at all locations except LF3-05 (Tables B-1 through B-5). The change in water storage indicates that moisture contents are steady to slightly declining within the landfill caps and within the ET zones. Location LF 2-07 showed the largest decrease in water storage of 1.41 in. over the entire soil column and 1.11 in. below the ET zone. In contrast, LF 3-05 located on Landfill III showed almost no change in storage over the entire soil column, within the ET zone, and below the ET zone. The NATs, LF2-04 and LF3-03, showed small negative changes in storage over the entire soil column and below the ET zone.

B-3.3 Evaluation of Evapotranspiration Depth

The depth to which ET is influential depends on the plants and their rooting depths, the soil types, and the meteorological conditions that are present. The ET depth is assumed to be 3 to 4 ft. For the ET depth to be evaluated, several years of data are necessary in order to assess yearly variations in moisture content in the upper part of the soil profile. The ET depths for the NAT locations are based on the amount of drainage occurring at 1-ft increments. The drainage from one layer to the next within the ET zone should steadily decrease until the zero flux boundary is reached. The depth at which drainage becomes nearly constant is assumed to be the ET depth. Plots of drainage for the five NATs are shown on Figure B-6.

Drainage was estimated by calculating the change in storage for each 1-ft layer over the course of one year and then summing the negative changes in storage. The monthly change in storage is calculated for a 1-ft layer and for the soil column as follows.

1-ft layer:

$$\Delta \text{Volumetric water content} = (\text{Vol}_{\text{march}} - \text{Vol}_{\text{february}}) * 12 \text{ in.} \quad (\text{B-5})$$

Soil column:

$$\Delta \text{Volumetric water content} = \Sigma \Delta \text{Volumetric water contents for each one foot layer.} \quad (\text{B-6})$$

The total drainage varied from 2.09 in. for LF3-03 to 4.71 in. for LF2-03. The drainage below the ET zone varied from 1.32 in. for LF3-03 to 3.97 in. for LF2-03 (Tables B-1 through B-5). The depth at which the drainage levels out should be the approximate ET depth. Based on these data, the plots suggest an ET depth of 2 to 3 ft (Figures B-6 and B-7).

B-3. TIME-DOMAIN REFLECTOMETER DATA ANALYSIS

Time-domain reflectometer data were collected from two locations at both Landfills II and III, with the volumetric moisture data collected at 6-in. intervals from the surface to a depth of 8 ft. The vertical time-domain reflectometer systems were installed in August and September 2000. The systems installed were Moisture Point systems from Environmental Sensors, Inc. The Moisture Point system consists of an MP-917, Moisture Point Type-K probes, Campbell Scientific CR10X data logger and COM200 phone modem, solar panel, battery, and probe cables. The MP-917 interrogates the probes and reduces the segment data to a numerical probe data set for export to the CR10X data logger.

This report covers data collected from October 2002 to October 2003. Plots of the time-domain reflectometer data are provided in Figures B-8 through B-11. The plots show the volumetric moisture content for 6-in. intervals from the surface to a depth of 8 ft except for TDR LF2-south. Probe failure occurred at the 5- to 6-ft interval from TDR LF2-south in late July 2002 and has not been corrected, because the problem cannot be fixed without digging up the probe. In general, the time-domain reflectometer data showed that the most significant increase in moisture content occurred between mid-January and May 2003 in response to several precipitation events. Unlike previous years, there was no distinct snowmelt event.

The monitoring of water movement or absence of infiltration through the soil cover on the landfills is the primary concern of the time-domain reflectometer monitoring at Landfills II and III. The low-permeability layer of the soil cover is located 6 to 18 in. below land surface (bls). During TDR installation, plant roots were seen at least partially penetrating this layer. Moisture contents that increase and decrease within the low-permeability layer indicate the movement of water into and out of this compacted layer. Downward water movement through the low-permeability layer can be determined by examining time-domain reflectometer moisture content data below the low-permeability layer. Increasing moisture contents below the low-permeability layer indicate water moved vertically through the low-permeability layer.

B-3.1 Infiltration and Recharge Calculations Based on Time-Domain Reflectometer Data

In general, the time-domain reflectometer data show an increase in moisture content to depths of less than 3 ft during late-winter/spring 2003, which was when the most significant infiltration of the year occurred. However, not all of the apparent moisture content increases are due to infiltration. A portion of the “apparent” increase in moisture for depths less than 5 ft could be due to soil thawing. Changes in moisture content to depths of 2 ft would reflect both an adjustment due to soil thawing and an influx of water from snowmelt. When soil water freezes, the dielectric constant of water reduces from approximately 80 to 5. The time-domain reflectometer probes then indicate a false decrease in water content that is consistent with the decrease in the dielectric constant of water when it is frozen. When the soil thaws, the probes reflect the rise in the dielectric constant as ice turns to liquid, and a false increase in water content is detected. Because the spring thaw occurs more suddenly than soil freezing in the fall, the spring shift is more pronounced on the moisture content curves.

Infiltration and drainage calculations are greater than the measured precipitation at the CFA NOAA weather station for the winter-spring of 2003 at three of the four time-domain reflectometer locations. The calculated infiltration for the time-domain reflectometer locations ranges from 1.05 to 1.91 in. (Table B-9). However, the measured precipitation at the CFA NOAA weather station is only 1.09 in. Similarly, drainage or losses in storage for the time-domain reflectometer arrays range from 1.02 to 1.93 in. of water. The high TDR readings could be related to probe calibration or to physical nonconformities in the subsurface, such as water filling void pockets next to the probe.

Recharge was evaluated by examining the changes in moisture content with depth and the depth of the spring infiltration penetration (Table B-10). Precipitation events other than in the period from mid-January to May 2003 had a marginal impact on only the 0- to 6-in. depth interval. At Landfills II and III, from depths of 4 to 8 ft or below the estimated ET depth of 3 to 4 ft, there was essentially no change in storage. This is shown in vertical moisture profiles shown on Figures B-12 and B-13.

The 3.5- to 4-ft interval at LF3-east showed an anomalous rise in soil moisture starting in July, but this significant increase did not show up in the 4- to 4.5-ft interval or the 3- to 3.5-ft interval. The fact that no intervals below 4 ft showed a significant increase in moisture suggests that any recharge was slight, less than 0.25 in., and that ET consumed most to all of the infiltrated water for the spring of 2003.

B-3.2 Water Storage Analyses for the Time-Domain Reflectometer Locations

Infiltration, drainage, and ET affect the amount of water in storage in the soil profile. Water storage analysis in this section reflects the change in moisture content over a period of approximately one year (October 2002 to October 2003). This one-year period is used to evaluate the net impacts of infiltration, drainage, and ET on the soil profile (i.e., gaining or losing moisture). The change in storage is represented by the following equation:

$$\Delta S = I - D - ET \quad (B-7)$$

where:

ΔS = change in storage

I = infiltration

D = drainage out of a system

ET = evapotranspiration.

The infiltration, drainage, and ET out of soil are nearly impossible to measure directly. However, the time-domain reflectometer probes do measure moisture content from which change in storage (ΔS) can be inferred. If the change in storage is positive over time, there is a net gain of water in the soil profile. Conversely, if the change is negative, there is a net water loss from the soil profile.

Changes in storage were estimated for the entire 8-ft depth of each time-domain reflectometer below land surface (Table B-11). The change in storage (ΔS) was calculated for each interval by multiplying the change in moisture content, ΔMC , by the thickness of the soil unit (L) or 6 in. for each segment, mathematically expressed as follows:

$$\Delta S = \Delta MC \times L \quad (B-8)$$

where:

ΔS = change in storage

ΔMC = moisture content

L = soil unit thickness.

The change in storage for the 8-ft profile was calculated for September 30, 2002, through September 30, 2003, for the TDRs at Landfills II and III. This one-year period encompasses an entire yearly moisture cycle and includes spring infiltration as well as the summer ET.

There was a small decrease in storage over the monitoring period for the 0- to 2-ft depth at the two locations on Landfill III and a small increase for the two locations at Landfill II (Table B-11). The two TDRs at Landfill III showed a loss in storage for the 0- to 8-ft depth interval over the monitoring period, while the two TDRs at Landfill II showed a slight gain (Table B-11). Changes in storage at Landfill II were -0.12 and -0.67 in. At Landfill III, changes in storage were 0.25 and 0.27 in.

From depths of 4 to 8 ft or below the estimated ET depth of 4 ft, there were slight loses at Landfill III and slight gains at Landfill II. The 3.5- to 4-ft interval at LF3-east showed an anomalous rise in soil moisture starting in July, but this significant increase did not show up in the 4- to 4.5-ft interval, and no rise occurred in the 3- to 3.5-ft interval. The fact that no intervals below 4 ft showed a significant increase in moisture suggests that any recharge was slight, less than 0.25 in., and that ET consumed most to all of the infiltrated water for the spring of 2003.

B-4. REFERENCES

Ansley, S. L., L. C. Hull, and S. M. Burns, 1988, *Shallow Drilling Report for CFA Landfills II and III-FY-1988, Characterization of Surficial Sediments*, EGG-ER-8291, Rev. 1, October 1988.

Table B-1. Neutron probe measurements and change in moisture content for LF2-04 in FY 2003.^a

Depth (ft)	10/24/2002	11/19/2002	12/19/2002	1/27/2003	2/24/2003	3/18/2003	4/29/2003	6/2/2003	6/19/2003
0.14	2,422	2,698	0.03	2,669	0.00	6,350	0.35	5,707	-0.06
1.14	2,725	2,744	0.00	2,836	0.02	3,995	0.22	3,784	-0.04
2.14	3,021	3,014	0.00	2,821	-0.04	2,995	0.03	3,006	0.00
3.14	3,000	3,115	0.02	3,042	-0.01	3,091	0.01	3,145	0.01
4.14	3,349	3,376	0.01	3,269	-0.02	3,296	0.01	3,410	0.02
5.14	3,912	3,807	-0.02	3,604	-0.04	3,854	0.05	3,907	0.01
6.14	3,610	3,427	-0.04	3,782	0.07	3,423	-0.07	3,412	0.00
7.14	3,839	3,884	0.01	3,613	-0.05	3,757	0.03	3,737	0.00
8.14	4,019	3,927	-0.02	3,887	-0.01	3,994	0.02	3,899	-0.02
9.14	4,499	4,547	0.01	4,348	-0.04	4,553	0.04	4,413	-0.03
10.14	4,790	4,657	-0.03	4,429	-0.04	4,643	0.04	4,531	-0.02
11.14	3,999	3,998	0.00	4,418	0.08	3,894	-0.10	3,830	-0.01
12.14	4,350	4,235	-0.02	3,916	-0.06	4,188	0.05	4,101	-0.02
13.14	3,924	3,993	0.01	4,344	0.07	3,986	-0.07	3,920	-0.01
14.14	4,233	4,338	0.02	4,208	-0.02	4,192	0.00	4,271	0.02
15.14	3,908	4,035	0.02	3,938	-0.02	3,887	-0.01	3,893	0.00
16.14	4,210	4,369	0.03	3,947	-0.08	4,226	0.05	4,306	0.02
17.14	3,575	3,551	0.00	3,879	0.06	3,567	-0.06	3,627	0.01
18.14	3,814	3,897	0.02	3,630	-0.05	3,748	0.02	3,840	0.02
19.14	4,385	4,459	0.01	3,870	-0.11	4,355	0.09	4,339	0.00
20.14	6,185	6,007	-0.06	6,051	0.01	6,099	0.02	5,927	-0.06
21.14	8,911	8,735	-0.06	8,607	-0.04	8,803	0.07	8,655	-0.05

Table B-1. (continued).

Depth (ft)	7/16/2003	8/29/2003	10/1/2003	Change in Storage		Change in Drainage 10/02 - 10/03	Calculated Totals
				10/02 - 10/03	10/02 - 10/03		
0.14	2,209	-0.02	2,050	-0.02	2,125	0.01	-0.03
1.14	2,649	-0.05	2,632	0.00	2,574	-0.01	-0.03
2.14	2,930	-0.02	2,848	-0.02	2,795	-0.01	-0.04
3.14	2,984	-0.01	2,812	-0.03	2,874	0.01	-0.02
4.14	3,191	0.00	3,204	0.00	3,162	-0.01	-0.04
5.14	3,796	0.02	3,687	-0.02	3,582	-0.02	-0.06
6.14	3,430	0.03	3,318	-0.02	3,380	0.01	-0.04
7.14	3,610	-0.02	3,648	0.01	3,761	0.02	-0.01
8.14	3,885	0.00	3,782	-0.02	3,944	0.03	-0.01
9.14	4,518	0.00	4,402	-0.02	4,394	0.00	-0.02
10.14	4,448	-0.04	4,437	0.00	4,491	0.01	-0.06
11.14	3,819	0.01	3,753	-0.01	3,788	0.01	-0.04
12.14	4,109	0.01	4,118	0.00	3,928	-0.04	-0.08
13.14	3,920	-0.01	3,937	0.00	3,843	-0.02	-0.02
14.14	4,232	0.02	4,139	-0.02	4,186	0.01	-0.01
15.14	3,759	-0.01	3,965	0.04	3,775	-0.04	-0.03
16.14	4,153	-0.02	4,229	0.01	4,173	-0.01	-0.01
17.14	3,498	0.00	3,439	-0.01	3,564	0.02	0.00
18.14	3,793	0.01	3,642	-0.03	3,785	0.03	-0.01
19.14	4,189	-0.01	4,317	0.02	4,265	-0.01	-0.02
20.14	6,124	0.03	6,057	-0.02	5,985	-0.02	-0.07
21.14	8,608	-0.02	8,753	0.05	8,578	-0.06	-0.11

Totals:

-0.76

a. Under the date, there are two columns. The first column shows the neutron probe count. The second column shows the change in moisture content from previous month.
 b. ET depth was set at 3.14 ft to be consistent with previous data analysis. The ET depth will be evaluated after four years of data are available.

Table B-2. Neutron probe measurements and change in moisture content for LF2-03 in FY 2003.^a

Depth (ft)	10/24/2002	11/19/2002	12/19/2002	1/27/2003	2/24/2003	3/18/2003	4/29/2003	6/2/2003	6/19/2003								
0	1,364	1,755	0.04	1,951	0.02	3,136	0.11	3,811	0.06	2,920	-0.09	3,192	0.03	1,579	-0.15	1,413	-0.02
0.92	3,205	3,186	0.00	3,099	-0.02	3,562	0.09	3,876	0.06	4,014	0.03	4,033	0.00	3,522	-0.10	3,339	-0.04
1.92	3,053	3,049	0.00	3,155	0.02	3,089	-0.01	3,157	0.01	3,121	-0.01	3,198	0.01	3,122	-0.01	3,154	0.01
2.92	3,364	3,308	-0.01	3,316	0.00	3,335	0.00	3,316	0.00	3,328	0.00	3,259	-0.01	3,209	-0.01	3,158	-0.01
3.92	3,269	3,374	0.02	3,175	-0.04	3,258	0.02	3,260	0.00	3,257	0.00	3,229	-0.01	3,218	0.00	3,283	0.01
4.92	3,333	3,422	0.02	3,408	0.00	3,370	-0.01	3,348	0.00	3,349	0.00	3,240	-0.02	3,345	0.02	3,349	0.00
5.92	3,666	3,632	-0.01	3,536	-0.02	3,451	-0.02	3,557	0.02	3,516	-0.01	3,455	-0.01	3,557	0.02	3,707	0.03
6.92	4,162	4,343	0.05	4,239	-0.03	4,198	-0.01	4,095	-0.03	4,192	0.03	4,072	-0.03	4,056	0.00	4,194	0.04
7.92	3,895	3,749	-0.03	3,785	0.01	3,719	-0.01	3,796	0.01	3,735	-0.01	3,824	0.02	3,753	-0.01	3,805	0.01
8.92	3,631	3,649	0.00	3,732	0.02	3,623	-0.02	3,611	0.00	3,619	0.00	3,631	0.00	3,490	-0.03	3,590	0.02
9.92	4,516	4,483	-0.01	4,440	-0.01	4,530	0.02	4,350	-0.03	4,434	0.02	4,457	0.00	4,480	0.00	4,493	0.00
10.92	4,263	4,157	-0.02	4,119	-0.01	4,258	0.03	4,138	-0.02	4,183	0.01	4,142	-0.01	4,180	0.01	4,216	0.01
11.92	3,794	3,753	-0.01	3,668	-0.02	3,771	0.02	3,645	-0.02	3,664	0.00	3,685	0.00	3,683	0.00	3,755	0.01
12.92	3,908	3,963	0.01	3,858	-0.02	3,840	0.00	3,949	0.02	3,852	-0.02	3,923	0.01	3,802	-0.02	3,844	0.01
13.92	4,132	4,237	0.02	4,154	-0.02	4,174	0.00	4,208	0.01	4,128	-0.02	4,174	0.01	4,078	-0.02	4,096	0.00
14.92	4,139	4,160	0.00	4,196	0.01	4,198	0.00	4,162	-0.01	4,097	-0.01	4,133	0.01	4,048	-0.02	4,148	0.02
15.92	3,909	3,717	-0.04	3,771	0.01	3,706	-0.01	3,739	0.01	3,693	-0.01	3,763	0.01	3,834	0.01	3,672	-0.03
16.92	4,704	4,646	-0.01	4,702	0.01	4,563	-0.03	4,614	0.01	4,744	0.02	4,703	-0.01	4,597	-0.02	4,642	0.01
17.92	5,624	5,681	0.01	5,710	0.01	5,707	0.00	5,782	0.01	5,772	0.00	5,812	0.01	5,683	-0.02	5,858	0.03
18.92	4,703	4,180	-0.10	4,392	0.04	4,349	-0.01	4,260	-0.02	4,229	-0.01	4,305	0.01	4,226	-0.02	4,294	0.01
19.92	7,488	7,380	-0.04	7,596	0.07	7,463	-0.04	7,517	0.02	7,461	-0.02	7,540	0.03	7,551	0.00	7,541	0.00
20.92	8,759	8,855	0.03	9,018	0.05	8,905	-0.04	9,045	0.05	9,157	0.04	8,942	-0.07	8,839			

Table B-2. (continued).

Depth (ft)				Change in Storage		Change in Drainage		Calculated Totals
	7/16/2003	8/28/2003	10/1/2003	10/02-10/03	10/02-10/03	10/02-10/03	10/02-10/03	
0	1,196	-0.02	1,278	0.01	1,418	0.01	0.01	0.28
0.92	3,263	-0.01	3,001	-0.05	3,090	0.02	-0.02	-0.21
1.92	2,965	-0.04	2,790	-0.03	2,994	0.04	-0.01	4.71
2.92	3,049	-0.02	3,090	0.01	3,020	-0.01	-0.07	3.97
3.92	3,235	-0.01	3,276	0.01	3,307	0.01	0.01	0.06
4.92	3,292	-0.01	3,314	0.00	3,211	-0.02	-0.02	0.07
5.92	3,571	-0.03	3,573	0.00	3,611	0.01	-0.01	0.09
6.92	4,116	-0.02	4,226	0.03	4,040	-0.05	-0.03	0.17
7.92	3,761	-0.01	3,806	0.01	3,778	-0.01	-0.02	0.08
8.92	3,530	-0.01	3,566	0.01	3,627	0.01	0.00	0.06
9.92	4,461	-0.01	4,384	-0.01	4,460	0.01	-0.01	0.07
10.92	4,215	0.00	4,217	0.00	4,147	-0.01	-0.02	0.07
11.92	3,659	-0.02	3,658	0.00	3,705	0.01	-0.02	0.07
12.92	3,919	0.01	3,967	0.01	3,809	-0.03	-0.02	0.10
13.92	4,052	-0.01	4,132	0.02	4,038	-0.02	-0.02	0.08
14.92	4,082	-0.01	4,106	0.00	3,987	-0.02	-0.03	0.07
15.92	3,654	0.00	3,750	0.02	3,705	-0.01	-0.04	0.10
16.92	4,738	0.02	4,817	0.02	4,537	-0.05	-0.03	0.12
17.92	5,793	-0.01	5,621	-0.03	5,754	0.03	0.02	0.07
18.92	4,280	0.00	4,345	0.01	4,419	0.01	-0.05	0.15
19.92	7,486	-0.02	7,439	-0.02	7,462	0.01	-0.01	0.14
20.92	8,911	0.02	8,890	-0.01	8,958	0.02	0.10	0.12
Totals:							-0.30	2.35
a. Under the date, there are two columns. The first column shows the neutron probe count. The second column shows the change in moisture content from previous month.								
b. ET depth was set at 3.92 ft to be consistent with previous data analysis. The ET depth will be evaluated after four years of data are available.								

Table B-3. Neutron probe measurements and change in moisture content for LF2-07 in FY 2003.^a

Depth (ft)	10/24/2002	11/19/2002	12/19/2002	1/27/2003	2/24/2003	3/18/2003	4/29/2003	6/2/2003	6/19/2003
0	1,054	1,530	75	76	81	83	81	80	61
0.84	4,099	4,291	0.06	4,163	-0.04	4,156	0.00	4,240	-0.01
1.84	3,380	3,522	0.03	3,490	-0.01	3,495	0.00	3,523	0.01
2.84	4,802	4,784	0.00	4,684	-0.02	4,827	0.03	4,650	-0.03
3.84	6,382	6,065	-0.11	6,126	0.02	5,927	-0.07	5,983	0.02
4.84	5,932	6,035	0.03	5,652	-0.13	5,570	-0.03	5,439	-0.04
5.84	5,032	5,057	0.01	5,061	0.00	5,018	-0.01	4,907	-0.04
6.84	6,229	6,237	0.00	6,196	-0.01	6,305	0.04	6,110	-0.07
7.84	6,990	6,764	-0.08	6,944	0.06	6,689	-0.09	6,930	0.08
8.84	6,991	6,744	-0.05	6,743	0.00	7,004	0.05	6,420	-0.11
9.84	5,661	5,481	-0.06	5,565	0.03	5,649	0.03	5,420	-0.08
10.84	7,349	7,501	0.05	7,455	-0.02	7,538	0.03	7,460	-0.03
11.84	5,522	5,578	0.01	5,496	-0.02	5,314	-0.03	5,320	0.00
12.84	5,734	5,785	0.01	5,640	-0.03	5,688	0.01	5,562	-0.02
13.84	6,489	6,578	0.03	6,485	-0.03	6,324	-0.05	6,334	0.00
14.84	7,681	7,704	0.01	7,723	0.01	7,590	-0.04	7,679	0.03
15.84	8,716	8,487	-0.08	8,769	0.09	8,493	-0.09	8,770	0.09
16.84	14,814	14,730	-0.03	14,883	0.05	14,799	-0.03	14,960	0.05
17.84	7,374	7,371	0.00	7,281	-0.03	7,347	0.02	7,230	-0.04
	7,569	7,491	-0.03	7,547	0.02	7,423	-0.04	7,516	0.03

Table B-3. (continued).

Depth (ft)	7/16/2003	8/29/2003	10/1/2003	Change in Storage		Change in Drainage 10/02 - 10/03	Calculated Totals
				10/02 - 10/03	10/02 - 10/03		
0	78	64	62			Change in storage within landfill cap:	-0.06
0.84	853	831	870			Total change in storage:	-1.41
0.84	4,203	-0.11	4,097	-0.04	3,949	-0.05	
1.84	3,291	-0.02	3,306	0.00	3,335	0.01	
2.84	4,575	-0.01	4,475	-0.02	4,468	0.00	
3.84	6,005	0.00	5,853	-0.05	5,855	0.00	
4.84	5,277	0.00	5,273	0.00	5,208	-0.02	
5.84	4,885	-0.01	4,952	0.02	4,880	-0.02	
6.84	6,209	0.00	6,290	0.03	6,275	-0.01	
7.84	6,911	-0.03	6,648	-0.09	6,809	0.05	
8.84	6,679	-0.01	6,723	0.01	6,648	-0.01	
9.84	5,553	0.03	5,485	-0.02	5,334	-0.05	
10.84	7,255	-0.03	7,112	-0.05	7,232	0.04	
11.84	5,324	0.03	5,229	-0.02	5,282	0.01	
12.84	5,344	-0.02	5,563	0.04	5,481	-0.02	
13.84	6,181	-0.01	6,217	0.01	6,244	0.01	
14.84	7,508	-0.02	7,554	0.02	7,510	-0.01	
15.84	8,422	0.00	8,388	-0.01	8,343	-0.02	
16.84	14,901	0.14	14,480	-0.14	14,513	0.01	
17.84	7,166	-0.03	7,310	0.05	7,090	-0.07	
Totals:	7,484		7,627		0.01	0.13	

a. Under the date, there are two columns. The first column shows the neutron probe count. The second column shows the change in moisture content from previous month.

b. ET depth was set at 3.84 ft to be consistent with previous data analysis. The ET depth will be evaluated after four years of data are available.

Table B-4. Neutron probe measurements and change in moisture content for LF3-03 in FY 2003.^a

Depth (ft)	10/24/2002	11/19/2002	12/19/2002	1/27/2003	2/24/2003	3/18/2003	4/29/2003	6/2/2003	6/19/2003
-0.3	61	75	59	65	83	65	81	67	47
0.7	387	512	743	1,254	1,196	957	1,163	518	411
0.7	3,542	3,762	0.07	3,689	-0.02	4,149	0.15	4,822	0.18
1.7	5,099	4,995	-0.02	5,099	0.02	5,029	-0.01	4,961	-0.01
2.7	4,136	4,127	0.00	4,087	-0.01	4,189	0.03	4,109	-0.03
3.7	3,089	3,203	0.02	3,172	-0.01	3,067	-0.02	3,112	0.01
4.7	3,020	3,005	0.00	3,095	0.02	2,899	-0.04	3,046	0.03
5.7	3,094	3,049	-0.01	3,186	0.03	2,983	-0.04	2,995	0.00
6.7	3,077	3,072	0.00	3,160	0.02	3,114	-0.01	3,035	-0.02
7.7	3,504	3,506	0.00	3,578	0.01	3,532	-0.01	3,481	-0.01
8.7	4,120	4,197	0.01	4,132	-0.01	3,996	-0.03	4,023	0.01
9.7	3,880	3,847	-0.01	3,877	0.01	3,791	-0.02	3,859	0.01
10.7	3,705	3,528	-0.03	3,580	0.01	3,476	-0.02	3,469	0.00
11.7	4,259	4,104	-0.03	4,056	-0.01	4,112	0.01	4,025	-0.02
12.7	4,065	4,009	-0.01	4,015	0.00	4,001	0.00	4,151	0.03
13.7	4,244	4,308	0.01	4,260	-0.01	4,309	0.01	4,260	-0.01
14.7	3,619	3,674	0.01	3,727	0.01	3,708	0.00	3,766	0.01
15.7	4,092	4,110	0.00	3,967	-0.03	4,019	0.01	4,058	0.01
16.7	3,733	3,846	0.02	3,751	-0.02	3,823	0.01	3,796	-0.01
17.7	3,865	3,867	0.00	3,747	-0.02	3,736	0.00	3,720	0.00
18.7	4,062	4,064	0.00	4,122	0.01	4,031	-0.02	4,003	-0.01
19.7	4,443	4,352	-0.02			0.00	4,244		

Table B-4. (continued).

Depth (ft)	7/16/2003	8/28/2003	10/1/2003	Change in Storage		Change in Drainage	Calculated Totals
				10/02 - 10/03	10/02 - 10/03		
-0.3	58	56	54			Change in storage within landfill cap:	-0.08
0.7	332	344	317			Total change in storage:	-0.46
0.7	3,683	-0.09	3,461	-0.07	3,464	0.00	-0.38
1.7	4,913	-0.05	4,924	0.00	4,971	0.01	2.09
2.7	4,065	-0.03	4,057	0.00	4,054	0.00	
3.7	3,031	-0.02	3,104	0.01	3,121	0.00	0.10
4.7	2,884	-0.02	2,948	0.01	2,910	-0.01	0.07
5.7	2,858	-0.02	2,954	0.02	2,923	-0.01	0.11
6.7	2,943	0.02	2,966	0.00	2,870	-0.02	-0.04
7.7	3,203	0.01	3,322	0.02	3,367	0.01	0.11
8.7	3,596	0.00	3,613	0.00	3,645	0.01	0.12
9.7	3,665	0.00	3,704	0.01	3,611	-0.02	-0.05
10.7	3,358	0.00	3,404	0.01	3,519	0.02	0.08
11.7	3,789	-0.02	3,939	0.03	4,051	0.02	-0.09
12.7	3,966	0.00	4,017	0.01	3,932	-0.02	0.08
13.7	4,076	-0.01	4,111	0.01	4,251	0.03	0.10
14.7	3,665	-0.01	3,673	0.00	3,692	0.00	0.05
15.7	3,921	0.00	4,042	0.02	4,000	-0.01	0.07
16.7	3,668	-0.01	3,788	0.02	3,794	0.00	0.06
17.7	3,666	-0.01	3,617	-0.01	3,711	0.02	0.07
18.7	3,917	0.00	3,955	0.01	4,045	0.02	0.05
	19.7						
Totals:		-0.46				2.09	

a. Under the date, there are two columns. The first column shows the neutron probe count. The second column shows the change in moisture content from previous month.

b. ET depth was set at 3.7 ft to be consistent with previous data analysis. The ET depth will be evaluated after four years of data are available.

Table B-5. Neutron probe measurements and change in moisture content for LF3-05 in FY 2003.^a

Depth (ft)	10/24/2002	11/19/2002	12/19/2002	1/27/2003	2/24/2003	3/18/2003	4/29/2003	6/2/2003	6/19/2003
	80	97	137	138	153	130	152	102	83
0.1	2,827	3,089	0.03	3,407	0.03	6,223	0.34	3,928	-0.29
1.1	3,670	3,773	0.03	3,676	-0.03	3,729	0.02	3,793	0.02
2.1	3,668	3,538	-0.02	3,636	0.02	3,591	-0.01	3,603	0.00
3.1	3,895	3,846	-0.01	3,796	-0.01	3,911	0.02	3,761	-0.03
4.1	5,183	5,315	0.04	5,210	-0.04	5,268	0.02	5,197	-0.02
5.1	3,689	3,648	-0.01	3,800	0.03	3,698	-0.02	3,688	0.00
6.1	2,680	2,733	0.01	2,548	-0.04	2,672	0.02	2,689	0.00
7.1	2,849	2,839	0.00	2,812	-0.01	2,893	0.02	2,822	-0.01
8.1	3,027	2,943	-0.02	2,964	0.00	2,948	0.00	2,935	0.00
9.1	3,016	3,124	0.02	3,026	-0.02	2,874	-0.03	2,927	0.01
10.1	3,223	3,234	0.00	3,129	-0.02	3,160	0.01	3,221	0.01
11.1	4,029	3,951	-0.01	3,886	-0.01	4,030	0.03	3,834	-0.04
12.1	4,151	4,198	0.01	4,181	0.00	4,227	0.01	4,089	-0.03
13.1	3,592	3,550	-0.01	3,547	0.00	3,519	-0.01	3,461	-0.01
14.1	4,064	4,099	0.01	4,054	-0.01	3,979	-0.01	4,039	0.01
15.1	4,310	4,262	-0.01	4,201	-0.01	4,210	0.00	4,415	0.04
16.1	3,936	4,009	0.01	3,836	-0.03	3,865	0.01	4,074	0.04
17.1	3,897	4,082	0.04	3,980	-0.02	3,858	-0.02	4,001	0.03
18.1	4,974	4,842	-0.03	4,810	-0.01	4,899	0.02	4,836	-0.01
19.1	5,548	5,498	-0.01	5,632	0.03	5,732	0.02	5,634	-0.02
20.1	3,802	3,724	-0.01	3,797	0.01	3,725	-0.01	3,648	-0.01
21.1	9,908	10,025	0.04	9,975	-0.02	9,829	-0.05	10,047	0.07
22.1	10,319	10,456	0.05	10,540	0.03	10,614	0.02	10,537	-0.03
	0.15		-0.12		0.38		-0.27	0.01	
								0.37	
									-0.36
									-0.23

Table B-5. (continued).

Depth (ft)	7/16/2003	10/1/2003	Change in Storage			Calculated Totals
			10/02 - 10/03	10/02 - 10/03	Change in Drainage	
76	76	75				
0.1	2,637	-0.07	2,454	-0.03	-0.11	0.77
1.1	3,827	-0.03	3,604	-0.08	-0.02	0.22
2.1	3,582	-0.02	3,535	-0.01	-0.03	0.07
3.1	3,891	0.03	3,818	-0.01	-0.01	0.09
4.1	5,147	-0.02	5,252	0.04	0.02	0.16
5.1	3,582	-0.03	3,655	0.01	-0.01	0.09
6.1	2,616	-0.01	2,561	-0.01	-0.02	0.10
7.1	2,825	0.02	2,823	0.00	0.00	0.06
8.1	3,004	0.02	3,004	0.00	0.00	0.04
9.1	3,138	0.02	3,049	-0.02	0.01	0.09
10.1	3,092	0.00	3,204	0.02	0.00	0.06
11.1	3,976	0.01	3,845	-0.03	-0.04	0.10
12.1	3,999	-0.02	4,089	0.02	-0.01	0.08
13.1	3,523	0.02	3,550	0.01	-0.01	0.06
14.1	4,092	0.01	4,043	-0.01	0.00	0.08
15.1	4,317	0.03	4,187	-0.02	-0.02	0.10
16.1	3,896	-0.02	3,879	0.00	-0.01	0.09
17.1	3,877	-0.03	3,938	0.01	0.01	0.11
18.1	4,806	-0.03	4,894	0.02	-0.02	0.07
19.1	5,537	-0.02	5,646	0.02	0.02	0.10
20.1	3,650	-0.01	3,662	0.00	-0.03	0.10
21.1	9,738	-0.09	10,072	0.11	0.06	0.24
22.1	10,396	0.04	10,520	0.04	0.07	0.22
Totals:	-0.19	0.08	-0.17	3.08		

a. Under the date, there are two columns. The first column shows the neutron probe count. The second column shows the change in moisture content from previous month.

b. ET depth was set at 3.1 ft to be consistent with previous data analysis. The ET depth will be evaluated after four years of data are available.

Table B-6. Layer classification for neutron probe measurements.^a

Nanodiamonds > 0.4 μm, Classification for location proc measurement									
LF2-07		LF2-04		LF2-03		LF3-05		LF3-03	
Depth/Type (ft)	Depth/Type (ft)	Depth/Type (ft)	Depth/Type (ft)	Depth/Type (ft)	Depth/Type (ft)	Depth/Type (ft)	Depth/Type (ft)	Depth/Type (ft)	Depth/Type (ft)
0.84	C	0.14	S	-0.08	S	0.1	S	0.7	C
1.84	S	1.14	S	0.92	S	1.1	C	1.7	S
2.84	S	2.14	S	1.92	S	2.1	S	2.7	C
3.84	C	3.14	S	2.92	S	3.1	S	3.7	S
4.84	C	4.14	S	3.92	S	4.1	C	4.7	S
5.84	C	5.14	S	4.92	S	5.1	S	5.7	S
6.84	C	6.14	S	5.92	S	6.1	S	6.7	S
7.84	C	7.14	S	6.92	S	7.1	S	7.7	S
8.84	S	8.14	S	7.92	S	8.1	S	8.7	S
9.84	C	9.14	S	8.92	S	9.1	S	9.7	S
10.84	C	10.14	S	9.92	S	10.1	S	10.7	S
11.84	C	11.14	S	10.92	S	11.1	S	11.7	S
12.84	S	12.14	S	11.92	S	12.1	S	12.7	S
13.84	C	13.14	S	12.92	S	13.1	S	13.7	S
14.84	C	14.14	S	13.92	S	14.1	S	14.7	S
15.84	C	15.14	S	14.92	S	15.1	S	15.7	S
16.84	C	16.14	S	15.92	S	16.1	S	16.7	S
17.84	C	17.14	S	16.92	S	17.1	S	17.7	S
		18.14	S	17.92	S	18.1	S	18.7	S
		19.14	C	18.92	S	19.1	S	19.7	S
		20.14	C	19.92	C	20.1	S	21.1	C
		21.14	C	20.92	C	21.1	C	22.1	C
				21.92	C	23.1	C	23.8	C

a. Type is either S = Sand and Gravel or C = Clay or Silt.

Table B-7. Infiltration and recharge calculations for neutron access probe locations.^a

Depth (ft)	Neutron Probe Measurements for LF2-07 ^b				Neutron Probe Measurements for LF2-04 ^c			
	12/19/2002	3/18/2003	4/29/2003	Depth (ft)	12/19/2002	3/18/2003	4/29/2003	
0	81	81	80	0.14	2,669	4,748	0.20	5,185
0	1,862	2,423	0.09	3,699	0.31	1.14	2,836	3,616
0.84	4,163	4,203	0.01	4,276	0.02	2.14	2,821	3,044
1.84	3,490	3,640	0.03	3,635	0.03	3.14	3,042	3,131
2.84	4,684	4,772	0.03	4,853	0.06	4.14	3,269	3,224
3.84	6,126	6,083	-0.01	5,971	-0.05	5.14	3,604	3,818
4.84	5,652	5,360	-0.10	5,375	-0.09	6.14	3,782	3,424
5.84	5,061	4,862	-0.07	4,916	-0.05	7.14	3,613	3,808
6.84	6,196	6,383	0.06	6,126	-0.02	8.14	3,887	3,968
7.84	6,944	6,947	0.00	6,743	-0.04	9.14	4,348	4,324
8.84	6,743	6,797	0.02	6,939	0.07	10.14	4,429	4,458
9.84	5,565	5,573	0.00	5,567	0.00	11.14	4,418	3,903
10.84	7,455	7,251	-0.04	7,252	-0.04	12.14	3,916	4,128
11.84	5,496	5,418	-0.01	5,190	-0.06	13.14	4,344	3,939
12.84	5,640	5,637	0.00	5,584	-0.02	14.14	4,208	4,335
13.84	6,485	6,297	-0.06	6,203	-0.09	15.14	3,938	3,854
14.84	7,723	7,773	0.02	7,570	-0.05	16.14	3,947	4,194
15.84	8,769	8,511	-0.09	8,517	-0.08	17.14	3,879	3,606
16.84	14,883	14,691	-0.06	14,703	-0.06	18.14	3,630	3,779
17.84	7,281	7,223	-0.02	7,490	0.07	19.14	3,870	4,315
18.84	7,547	7,762	0.07	7,590	-0.06	20.14	6,051	6,008
						21.14	8,607	8,792
							0.06	8,843
							0.41	0.45
							0.01	-0.04
	Infiltration (in.)	0.16		0.42				
	Recharge (in.)	-0.35		-0.48				

Table B-7. (continued).

Depth (ft)	Neutron Probe Measurements for LF2-03 ^d			Neutron Probe Measurements for LF2-07 ^e		
	12/19/2002	3/18/2003	4/29/2003	Depth (ft)	12/19/2002	3/18/2003
0	151	2920	0.09	3,192	0.12	59
0.92	3,099	4014	0.18	4,033	0.18	65
1.92	3,155	3121	-0.01	3,198	0.01	-0.3
2.92	3,316	3328	0.00	3,259	-0.01	0.7
3.92	3,175	3257	0.02	3,229	0.01	1.7
4.92	3,408	3349	-0.01	3,240	-0.03	2.7
5.92	3,536	3516	0.00	3,455	-0.02	3.7
6.92	4,239	4192	-0.01	4,072	-0.03	4.7
7.92	3,785	3735	-0.01	3,824	0.01	5.7
8.92	3,732	3619	-0.02	3,631	-0.02	6.7
9.92	4,440	4434	0.00	4,457	0.00	7.7
10.92	4,119	4183	0.01	4,142	0.00	8.7
11.92	3,668	3664	0.00	3,685	0.00	9.7
12.92	3,858	3852	0.00	3,923	0.01	10.7
13.92	4,154	4128	0.00	4,174	0.00	11.7
14.92	4,196	4097	-0.02	4,133	-0.01	12.7
15.92	3,771	3693	-0.01	3,763	0.00	13.7
16.92	4,702	4744	0.01	4,703	0.00	14.7
17.92	5,710	5772	0.01	5,812	0.02	15.7
18.92	4,392	4229	-0.03	4,305	-0.02	16.7
19.92	7,596	7461	-0.05	7,540	-0.02	17.7
20.92	9,018	9157	0.05	8,942	-0.03	18.7
21.92						
					0.30	0.30
					-0.12	-0.12

Table B-7. (continued).

	Neutron Probe Measurements for LF2-04 ^f		
Depth (ft)	12/19/2002	3/18/2003	4/29/2003
0.1	3,407	5,921	0.30
1.1	3,676	3,719	0.01
2.1	3,636	3,645	0.00
3.1	3,796	3,841	0.01
4.1	5,210	5,129	-0.03
5.1	3,800	3,585	-0.04
6.1	2,548	2,542	0.00
7.1	2,812	2,805	0.00
8.1	2,964	2,964	0.00
9.1	3,026	3,052	0.00
10.1	3,129	3,128	0.00
11.1	3,886	3,855	-0.01
12.1	4,181	4,210	0.01
13.1	3,547	3,375	-0.03
14.1	4,051	3,916	-0.03
15.1	4,201	4,294	0.02
16.1	3,836	3,849	0.00
17.1	3,980	3,924	-0.01
18.1	4,810	4,839	0.00
19.1	5,632	5,653	0.00
20.1	3,797	3,856	0.01
21.1	9,975	9,877	-0.03
22.1	10,540	10,350	-0.06
	Infiltration (in.)	0.30	0.47
	Recharge (in.)	-0.17	0.05

a. Under the date, there are two columns. The first shows the neutron probe count. The second column shows the change in moisture from the previous month.

b. ET depth was set at 3.7 ft to be consistent with previous data analysis. The ET depth will be evaluated after four years of data are available.

c. ET depth was set at 3.14 ft to be consistent with previous data analysis. The ET depth will be evaluated after four years of data are available.

d. ET depth was set at 3.92 ft to be consistent with previous data analysis. The ET depth will be evaluated after four years of data are available.

e. ET depth was set at 3.7 ft to be consistent with previous data analysis. The ET depth will be evaluated after four years of data are available.

f. ET depth was set at 3.1 ft to be consistent with previous data analysis. The ET depth will be evaluated after four years of data are available.

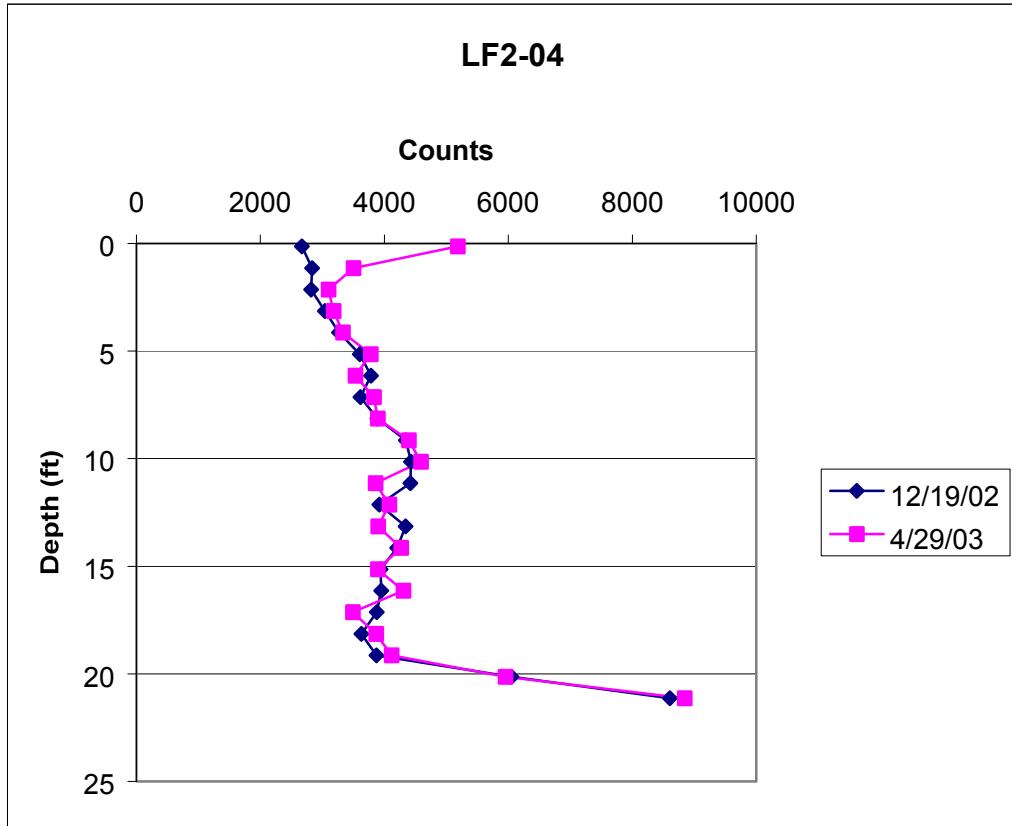


Figure B-1. Moisture profile plot for LF2-04.

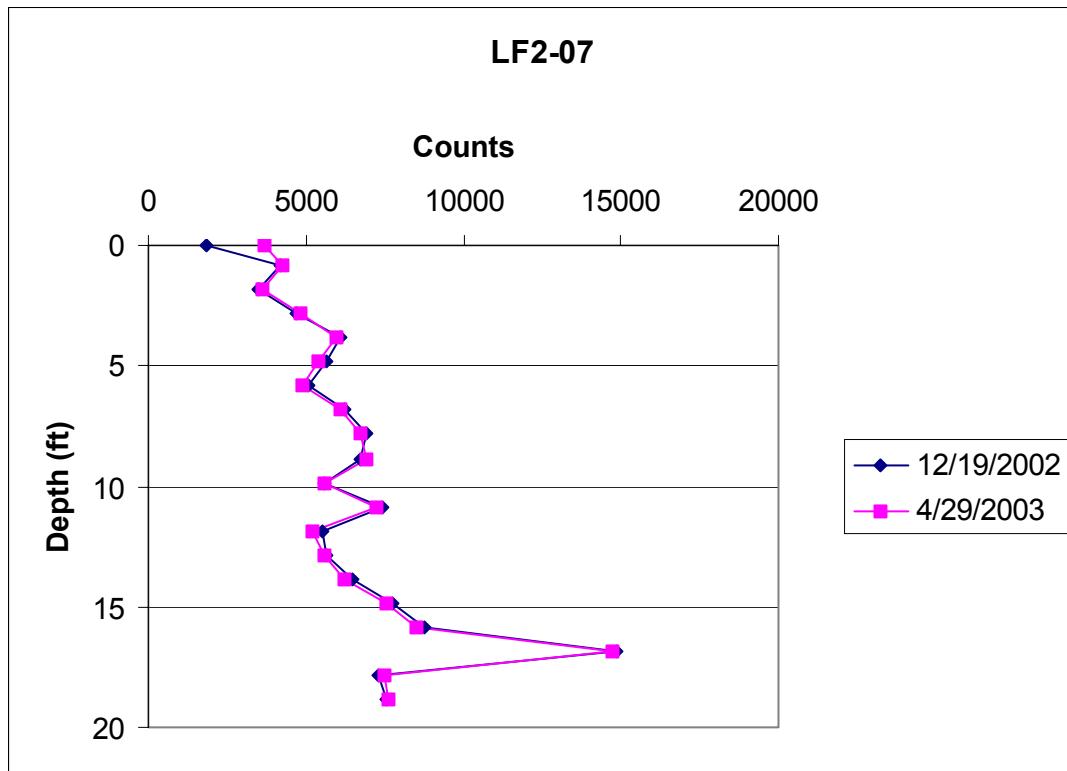


Figure B-2. Moisture profile plot for LF2-07.

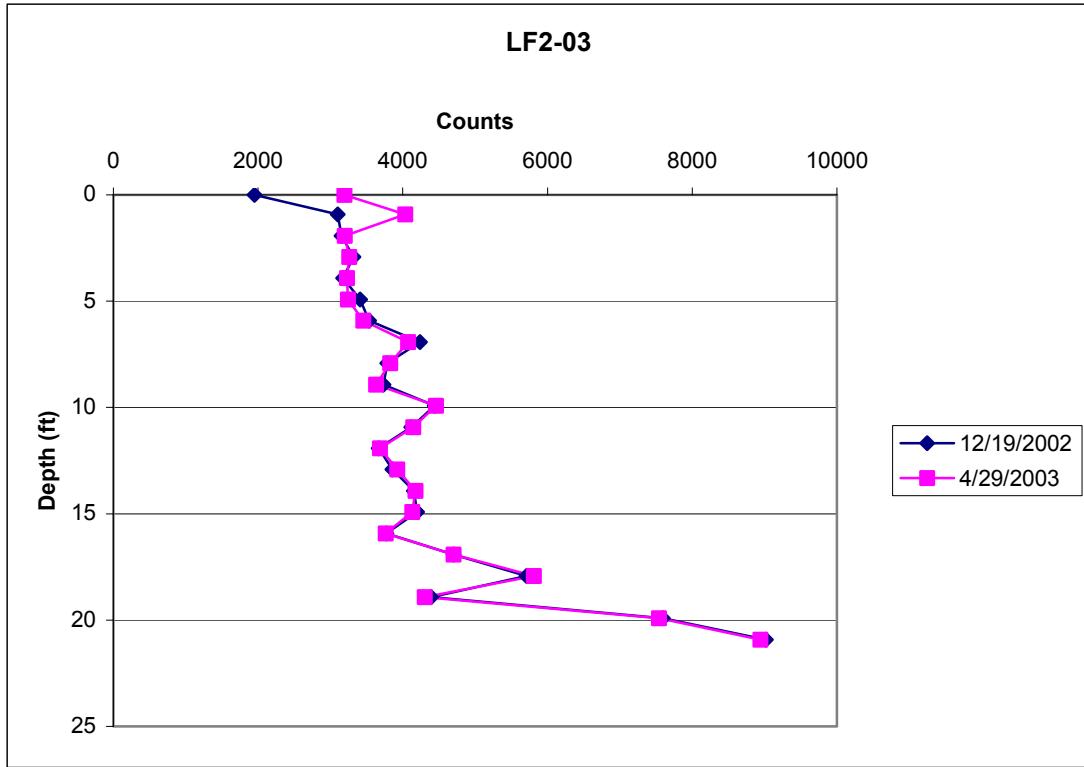


Figure B-3. Moisture profile plot for LF2-03.

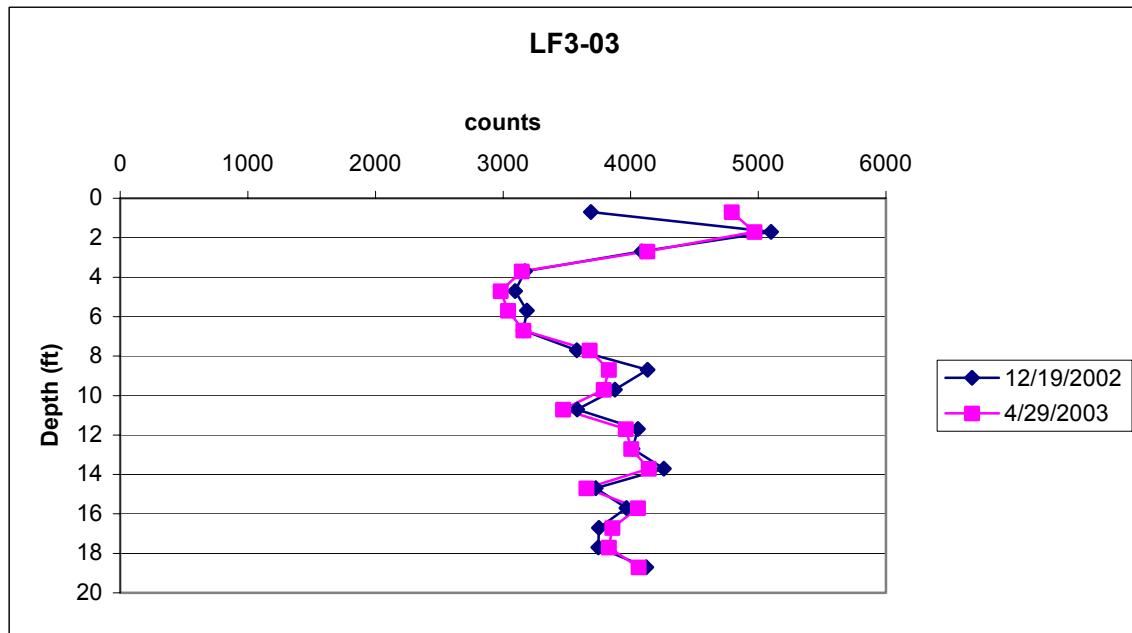


Figure B-4. Moisture profile plot for LF3-03.

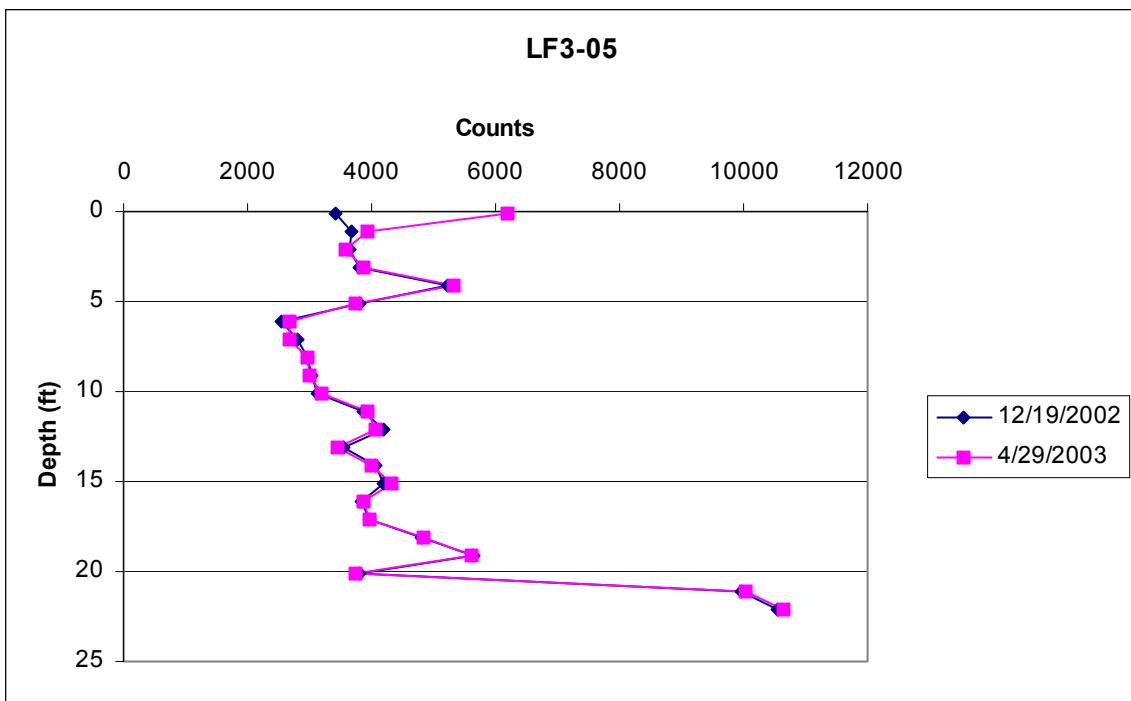


Figure B-5. Moisture profile plot for LF3-05.

Table B-8. Precipitation summary for FY 2003.

Month	Amount (in.)
October	0.02
November	0.41
December	0.25
January	0.16
February	0.42
March	0.26
April	1.56
May	0.46
June	0.03
July	0
August	0.18
September	0.52
Year	4.27
Winter ^a	1.09

a. December 2002 – March 2003.

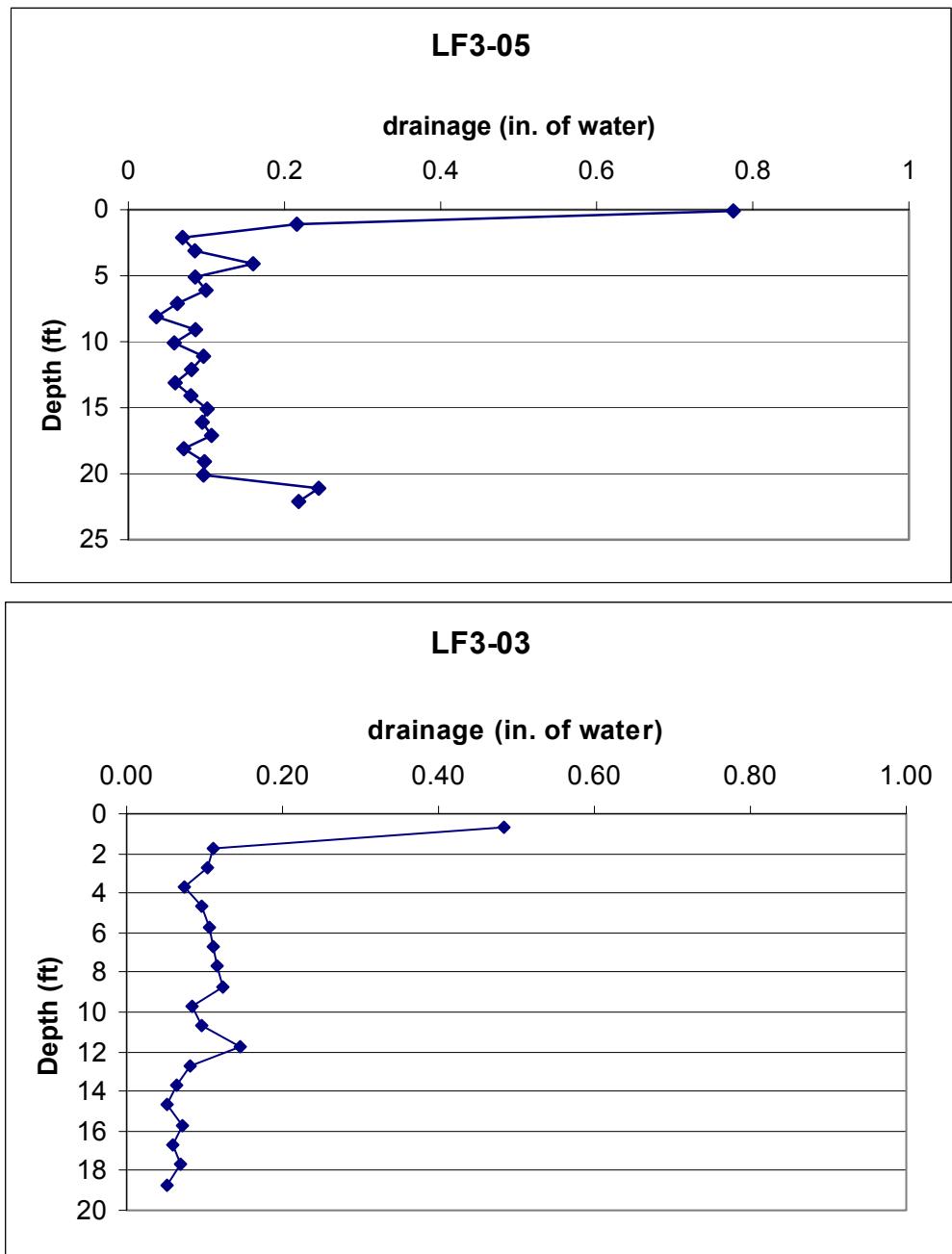


Figure B-6. Drainage plots for Landfill III NATs.

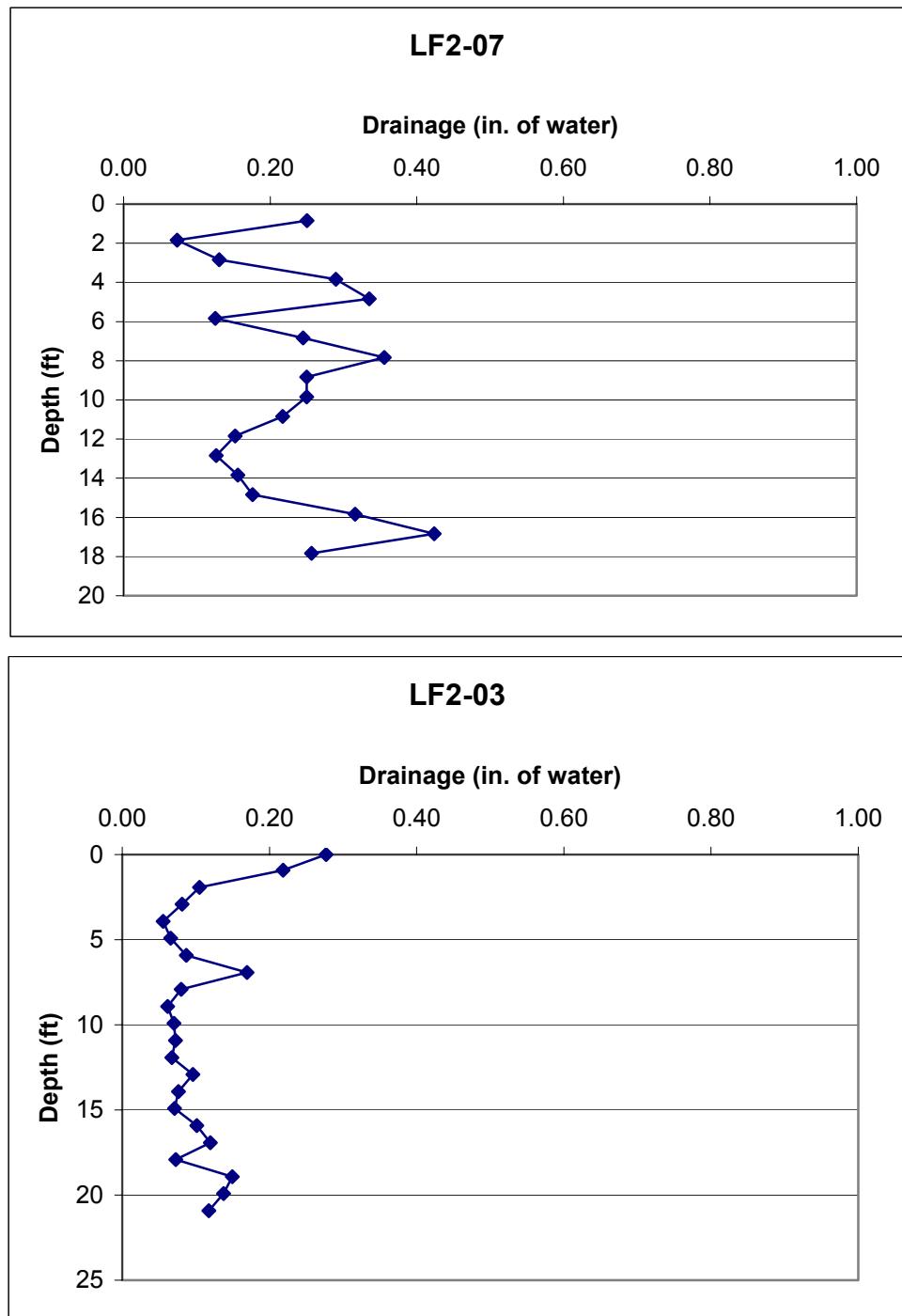


Figure B-7. Drainage plots for Landfill II NATs.

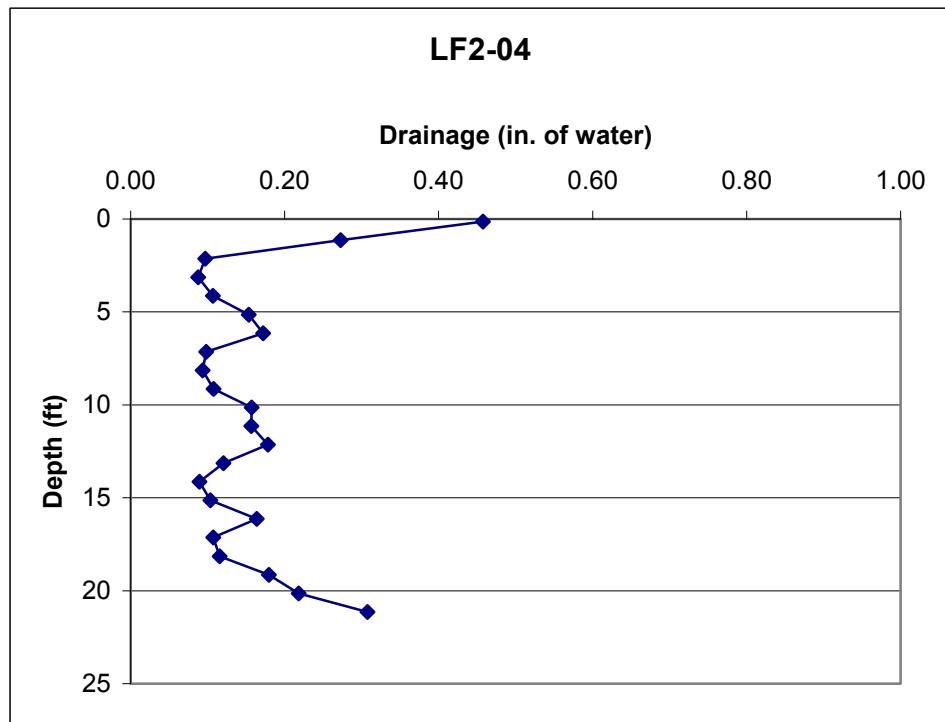


Figure B-7. (continued).

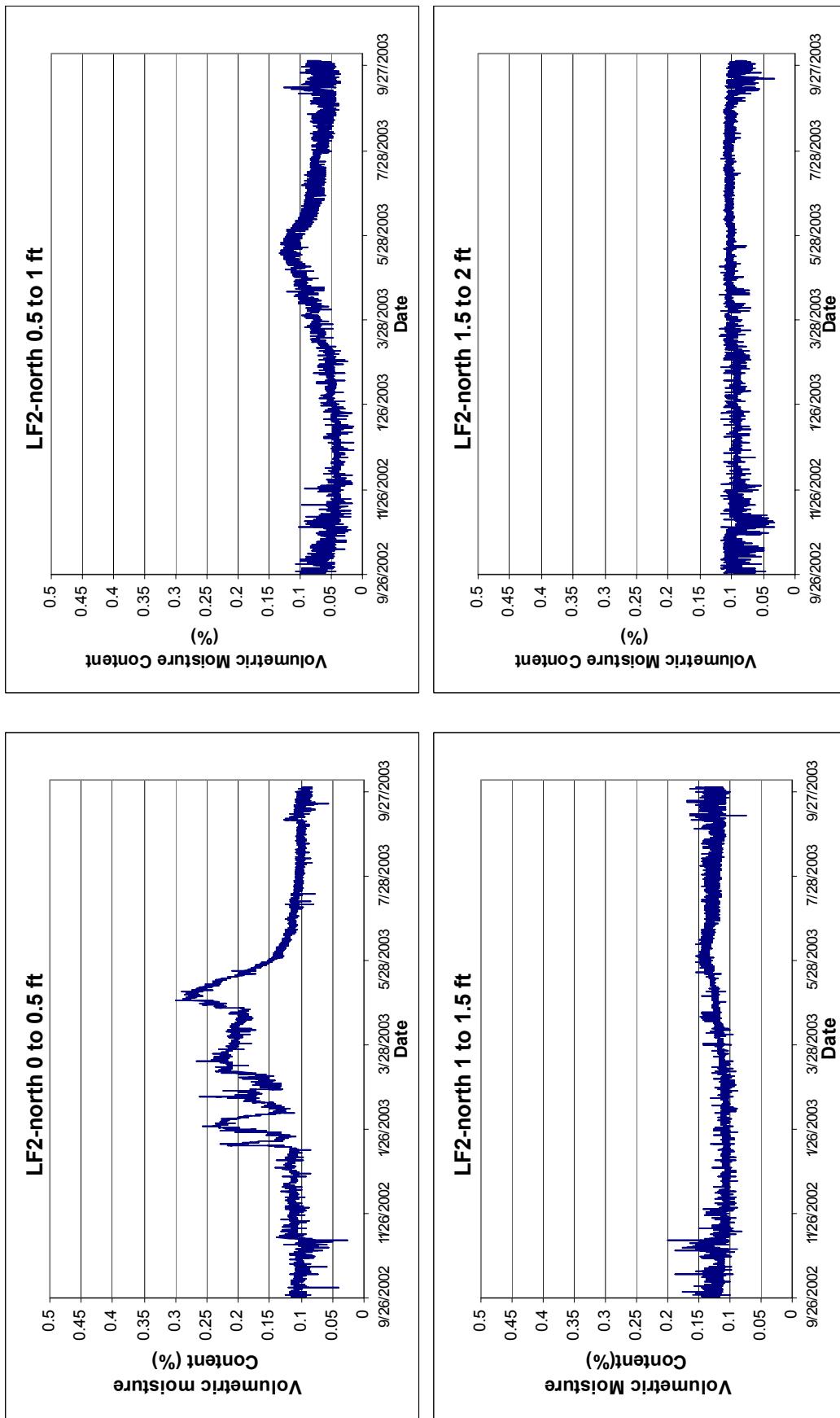


Figure B-8. TDR moisture data for LF2-north.

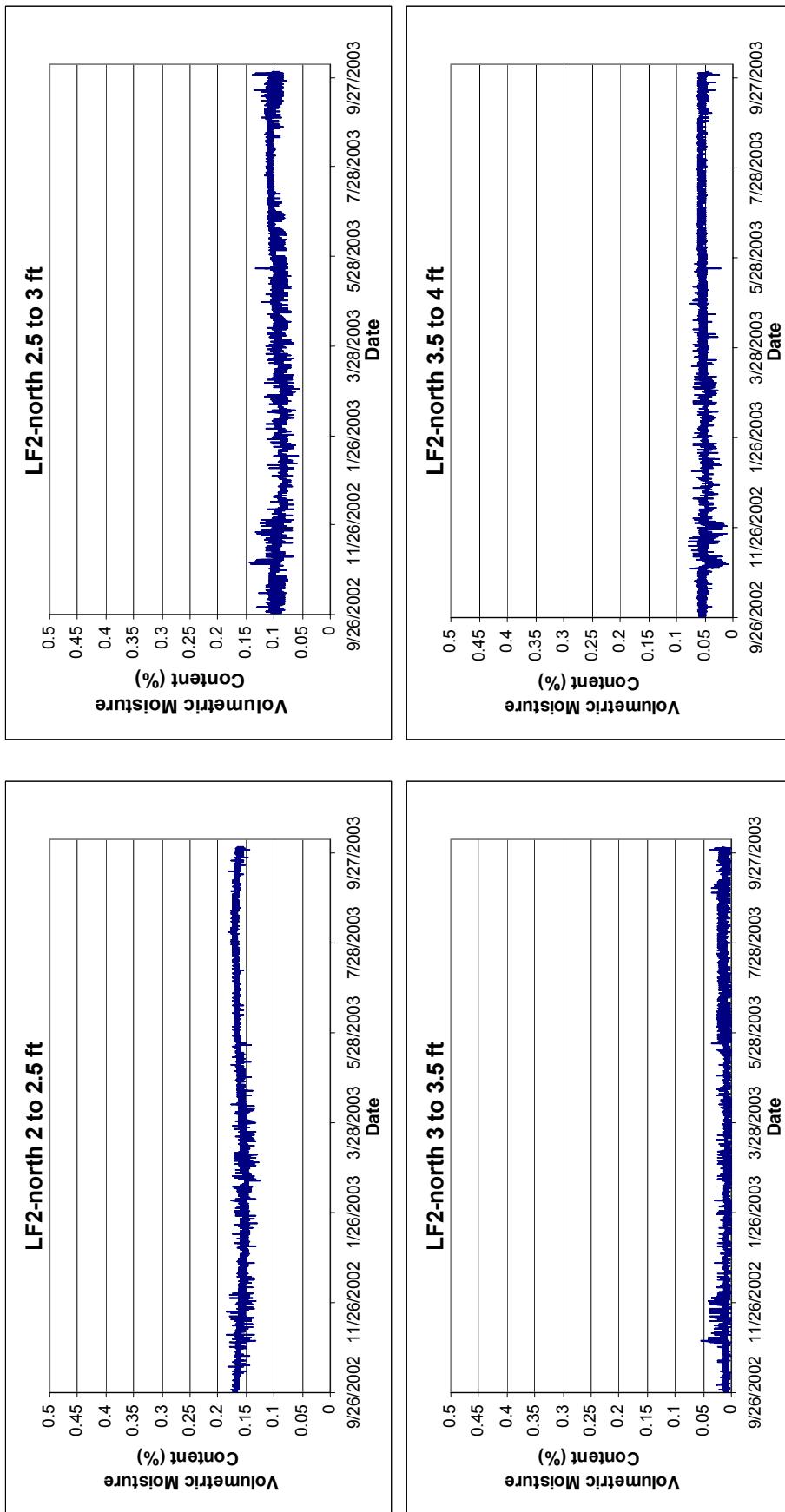


Figure B-8. (continued).

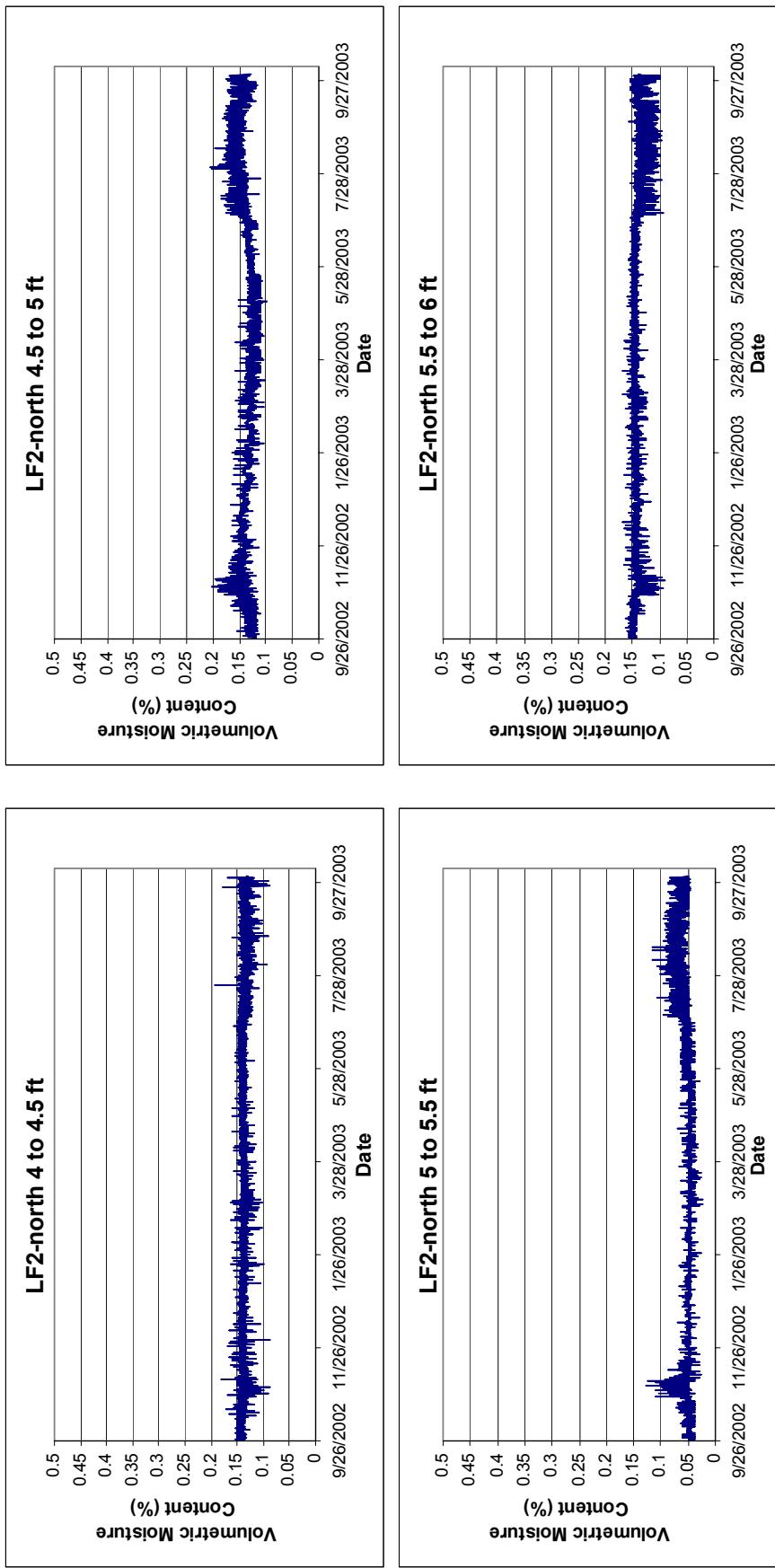


Figure B-8. (continued).

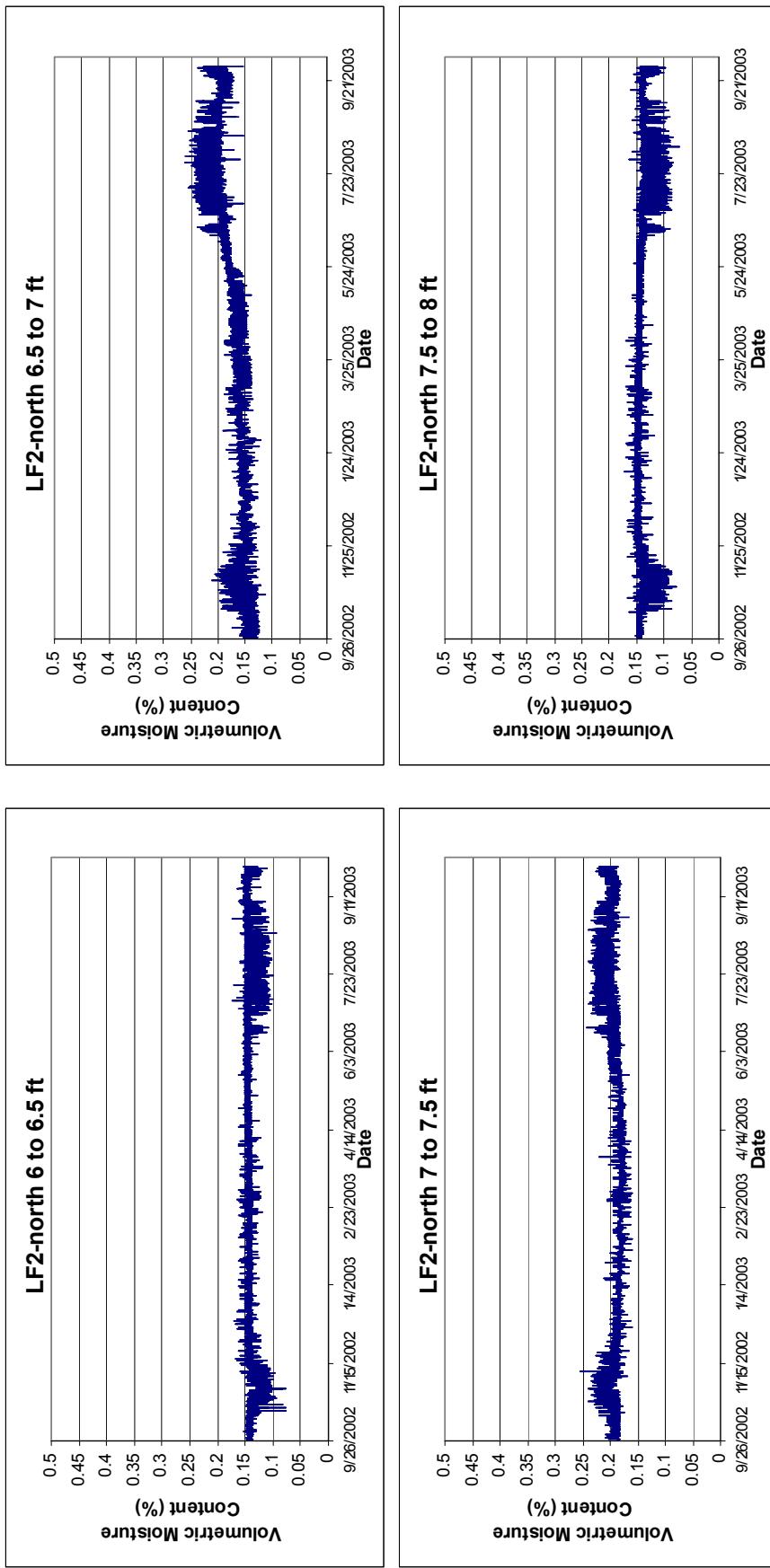


Figure B-8. (continued).

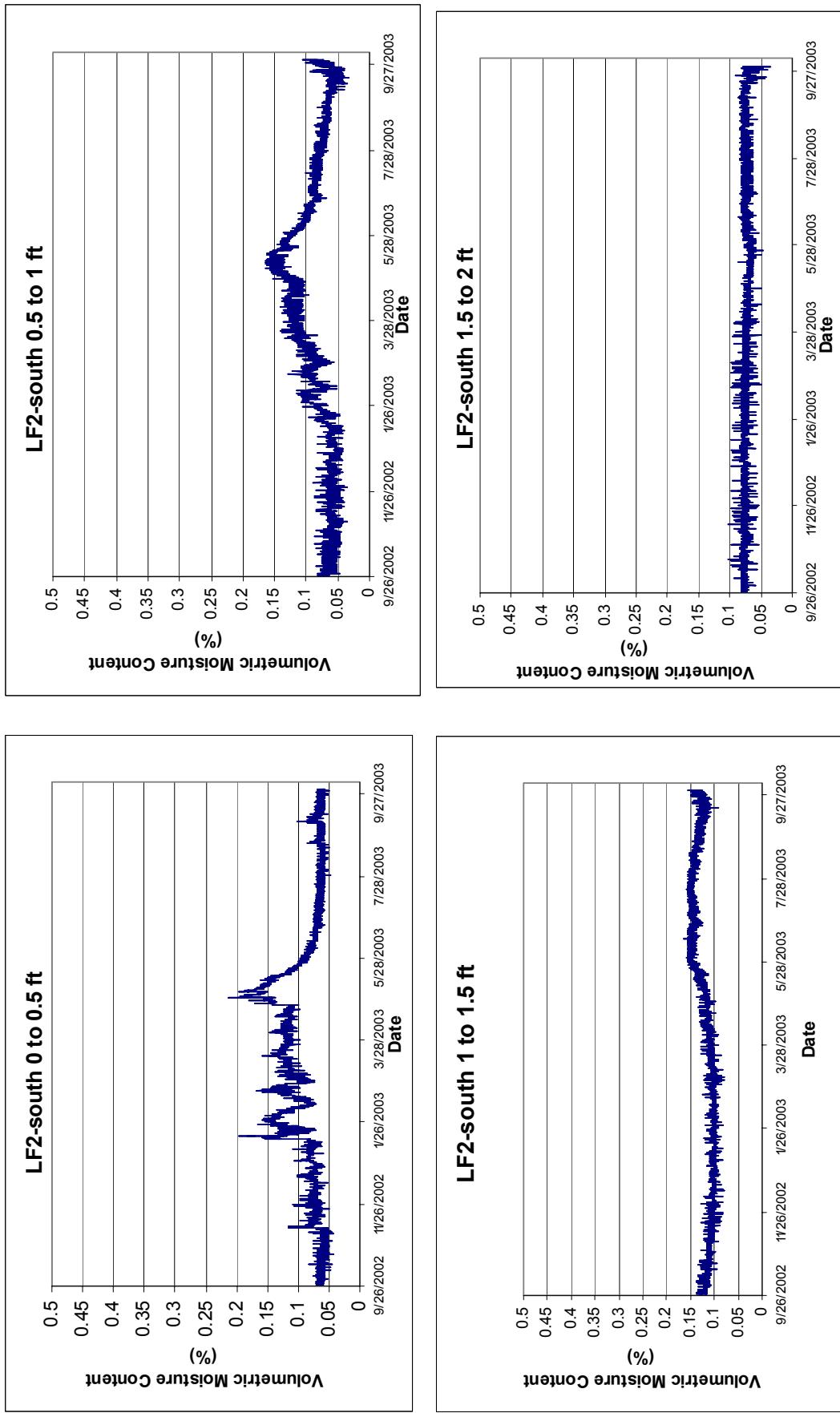


Figure B-9. TDR moisture data for LF2-south.

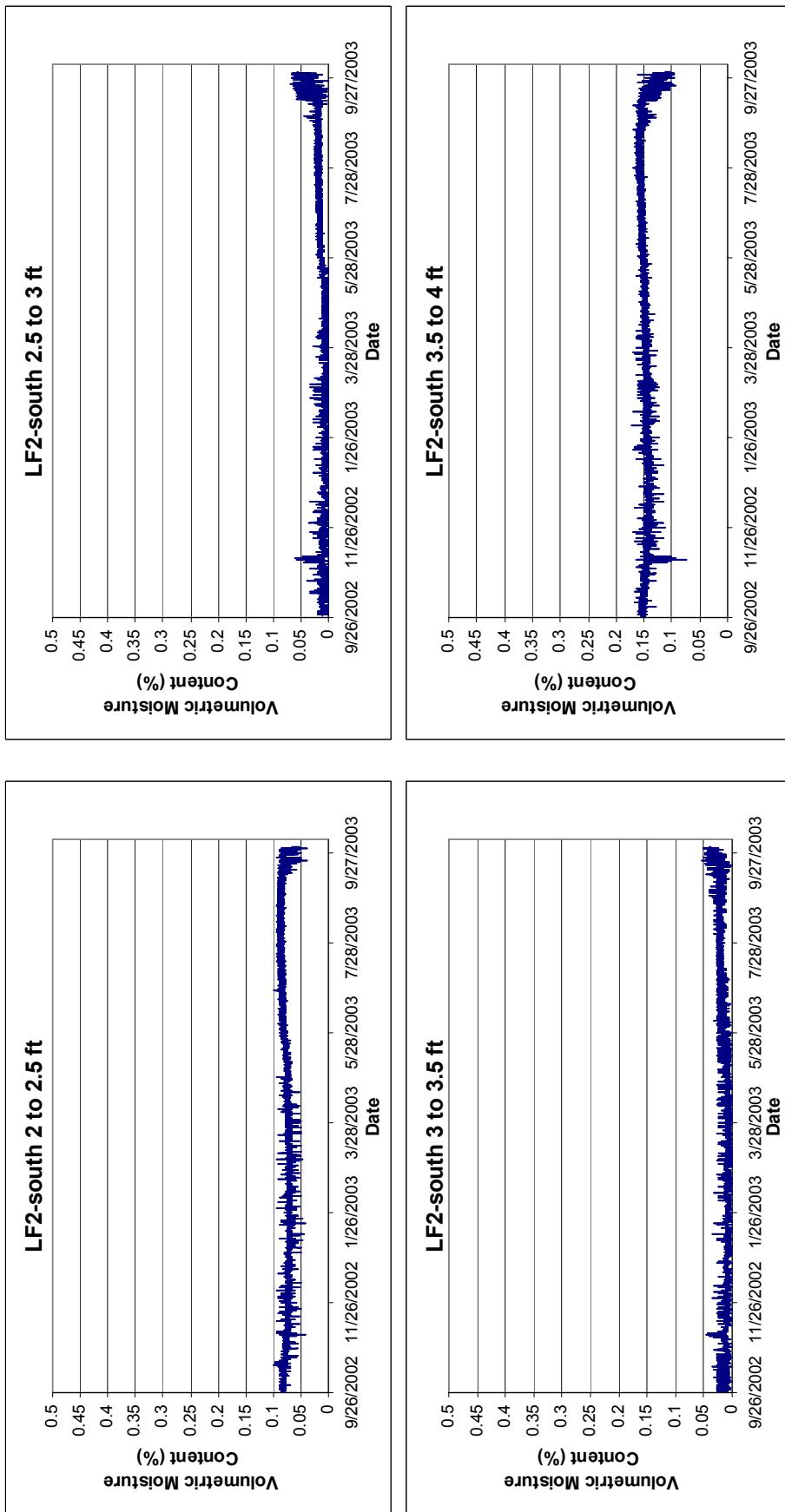


Figure B-9. (continued).

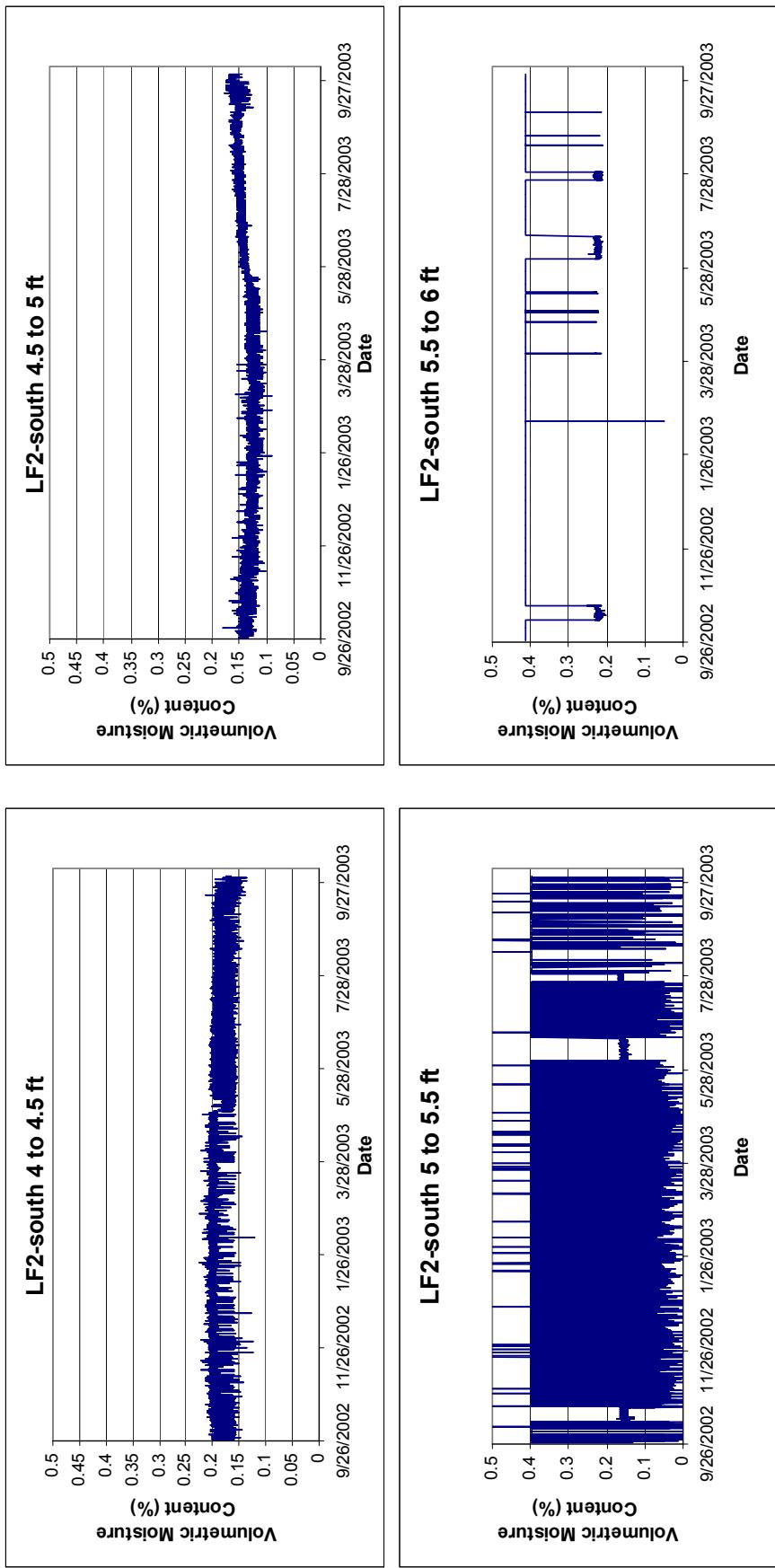


Figure B-9. (continued).

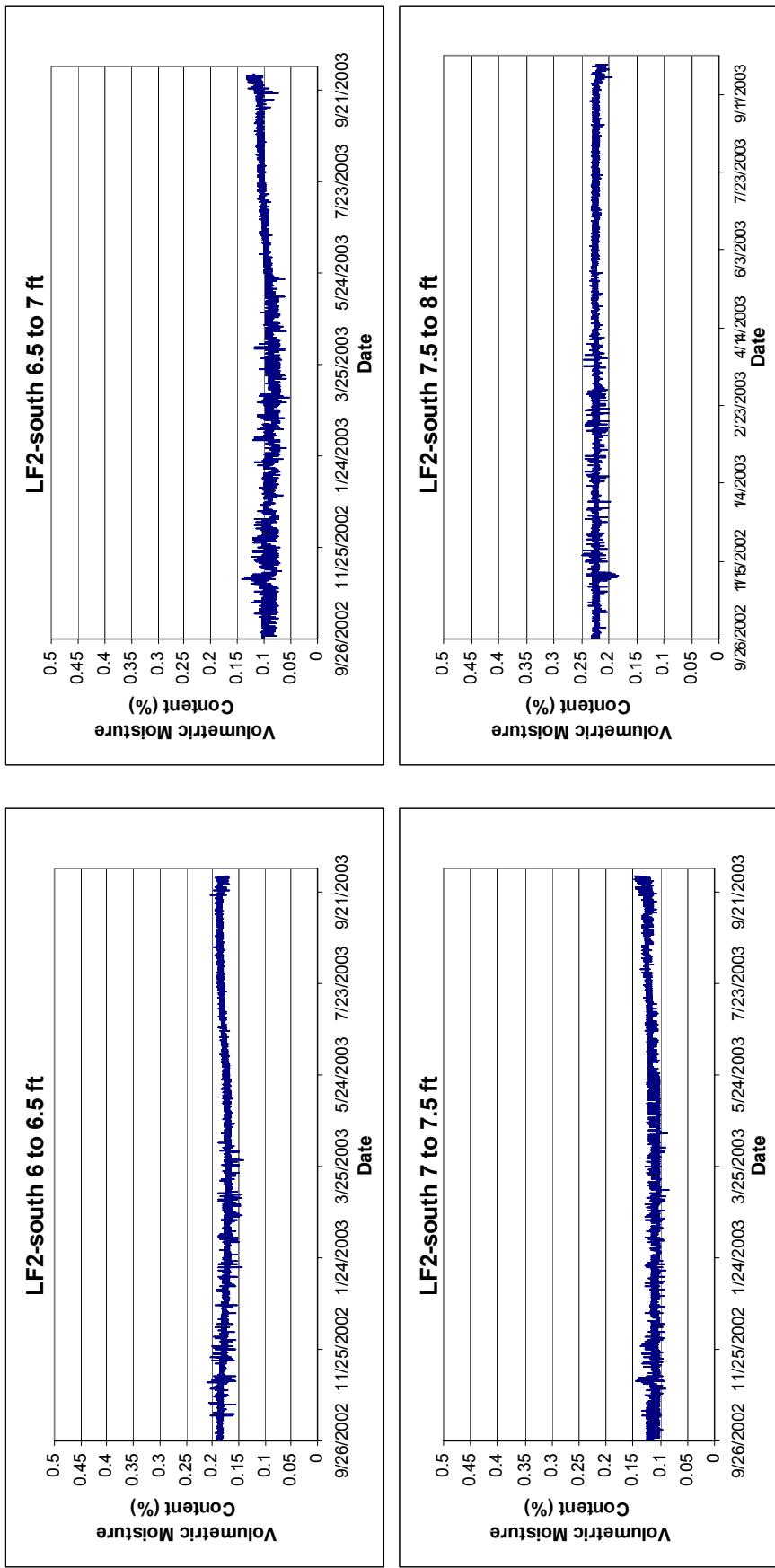


Figure B-9. (continued).

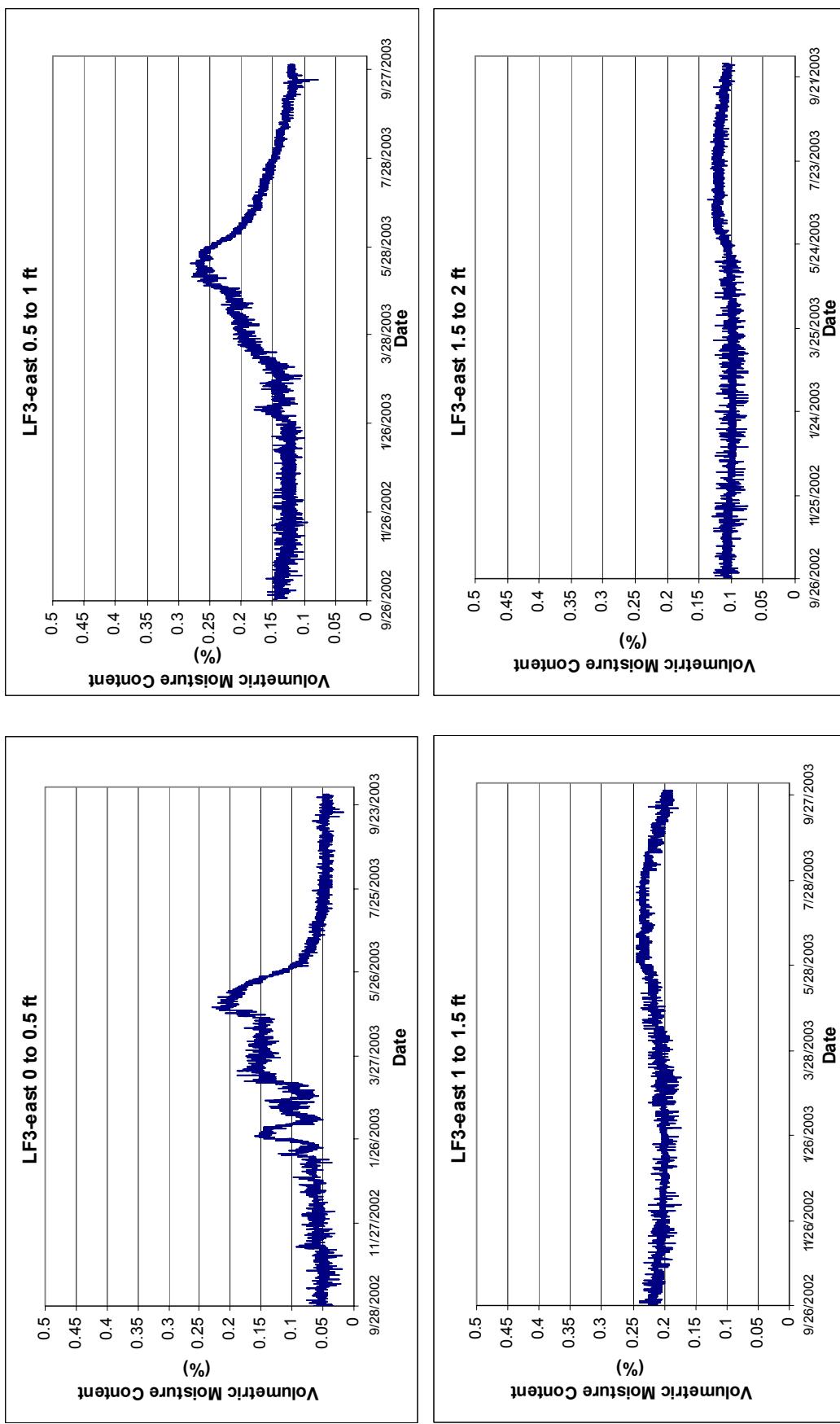


Figure B-10. TDR moisture data for LF3-east.

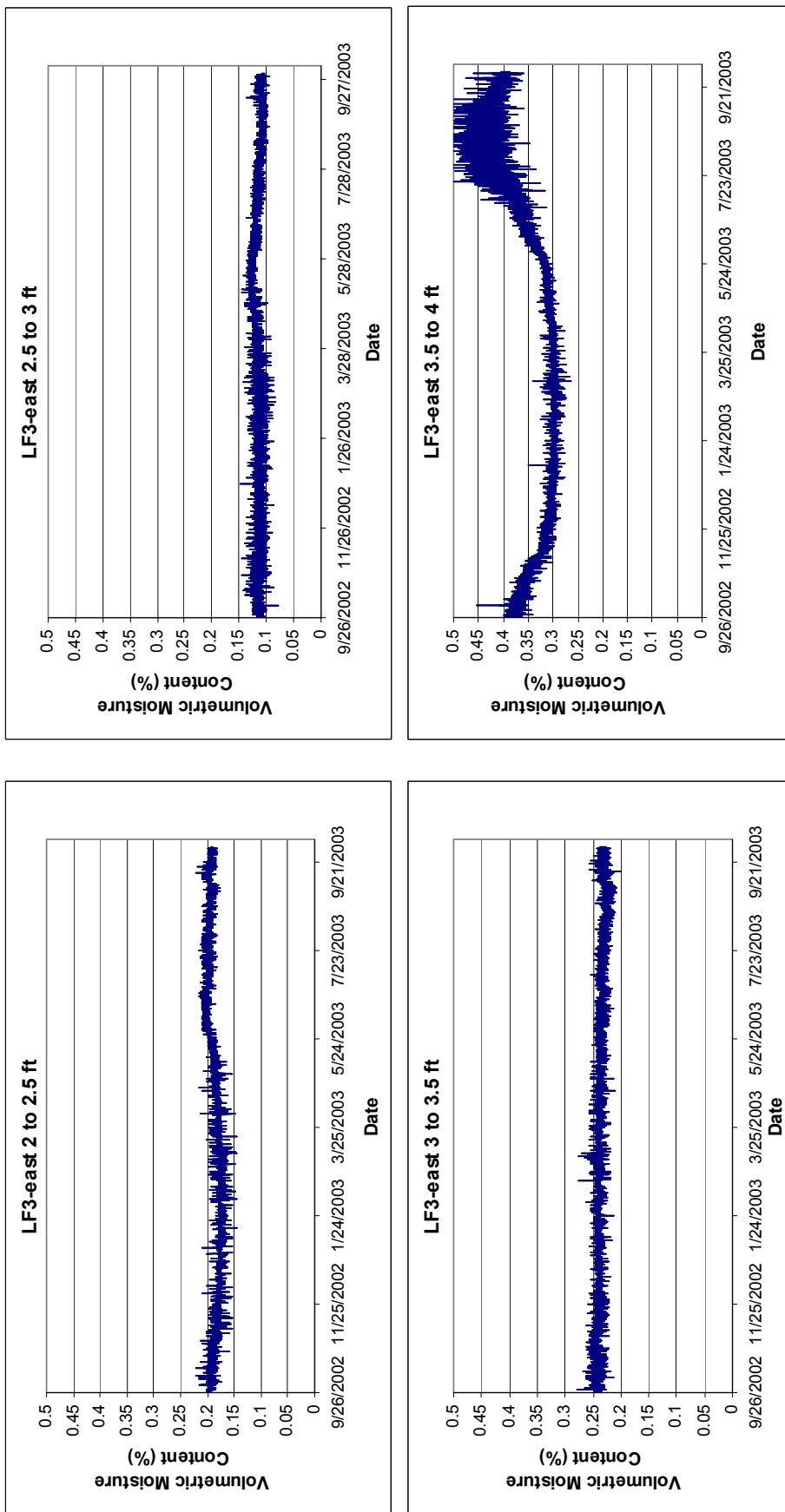


Figure B-10. (continued).

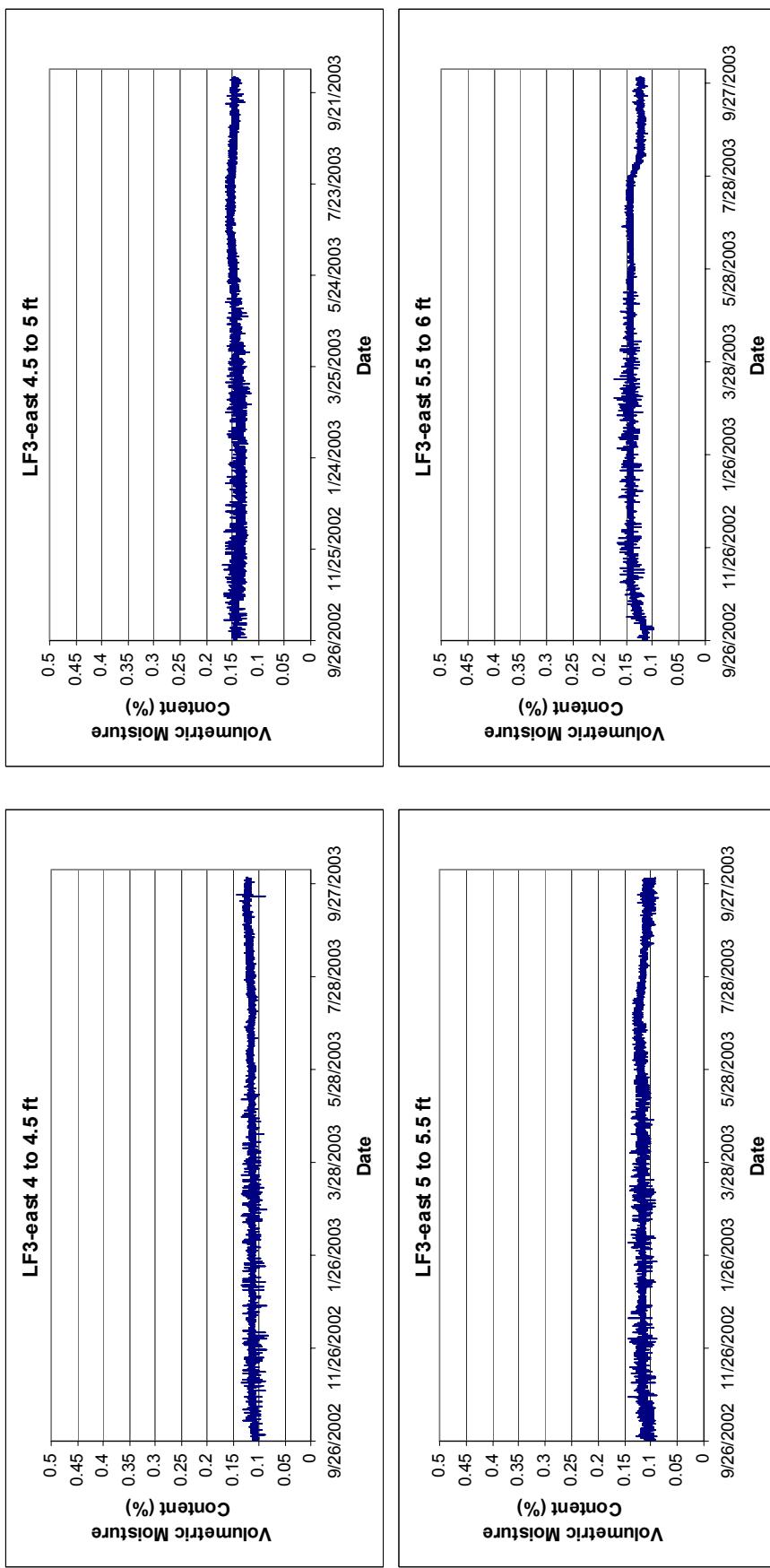


Figure B-10. (continued).

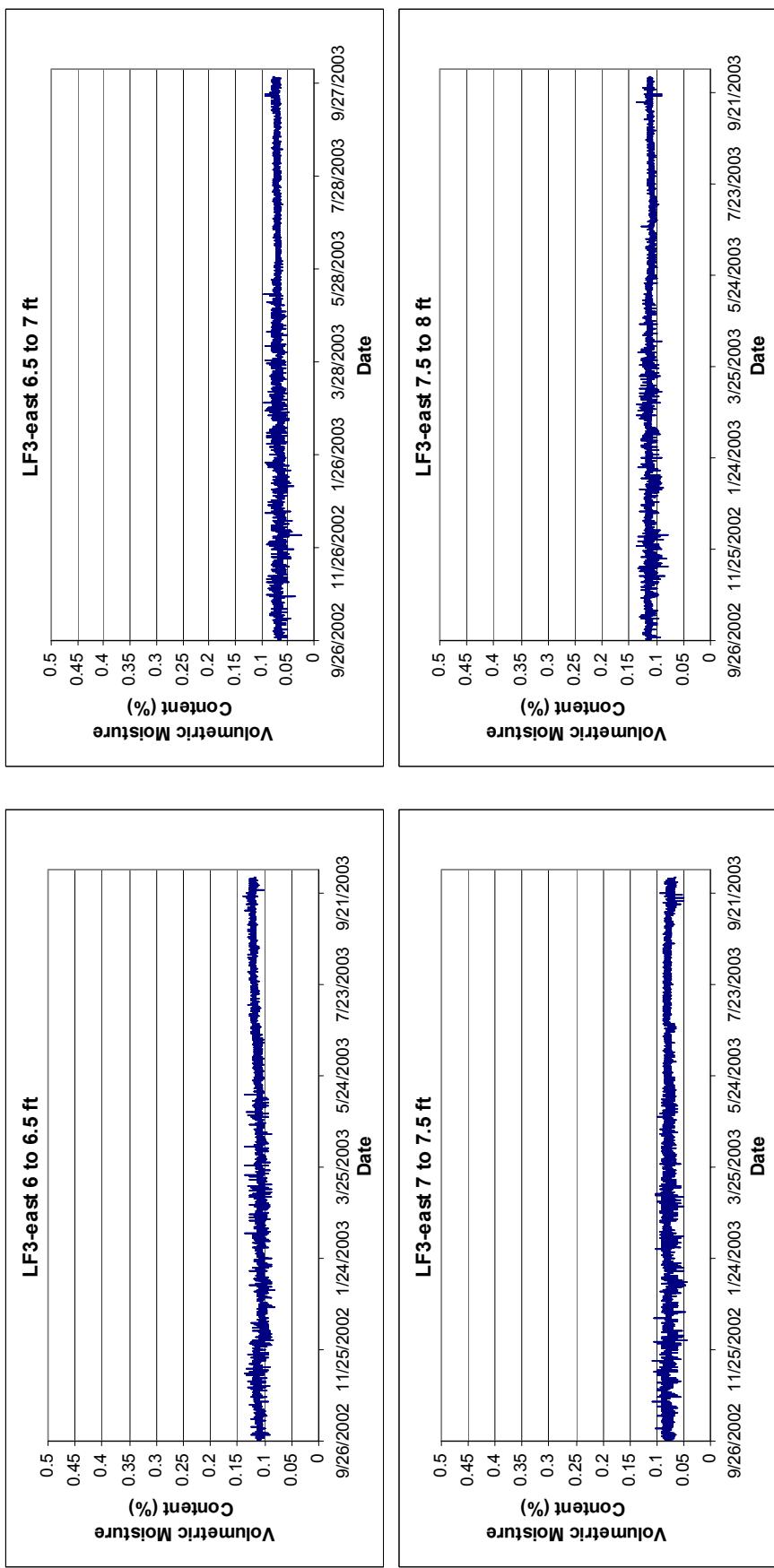


Figure B-10. (continued).

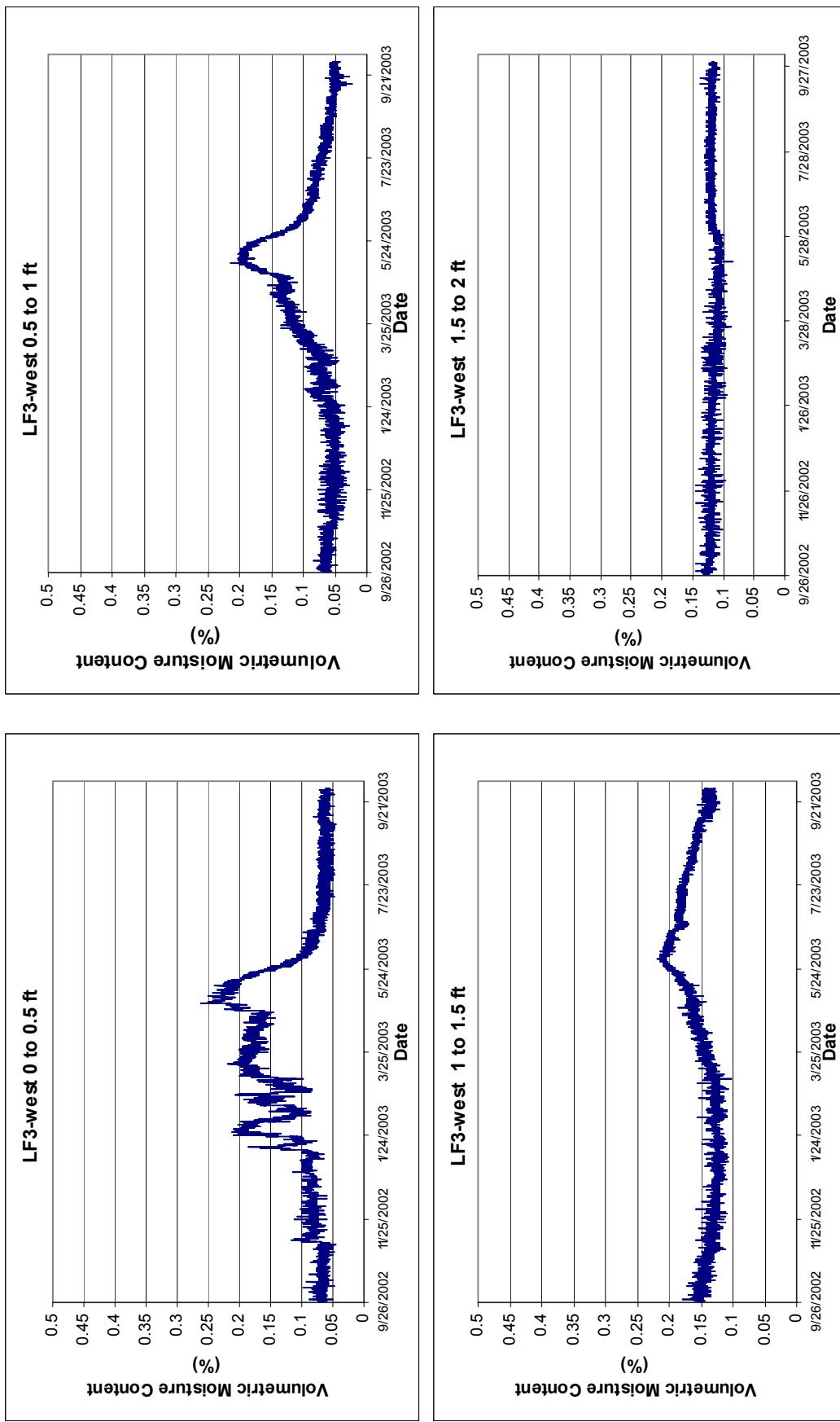


Figure B-11. TDR moisture data for LF3-west.

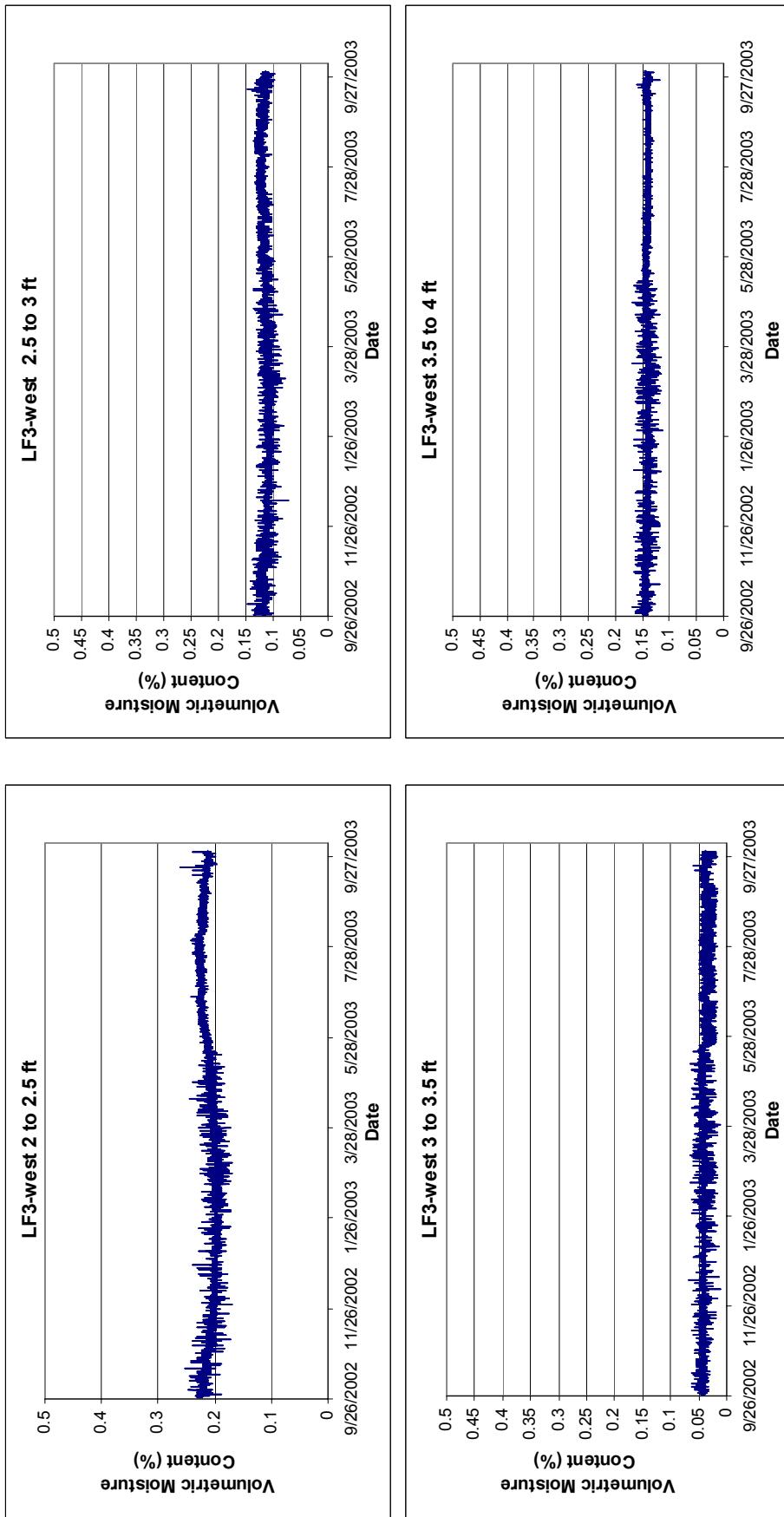


Figure B-11. (continued).

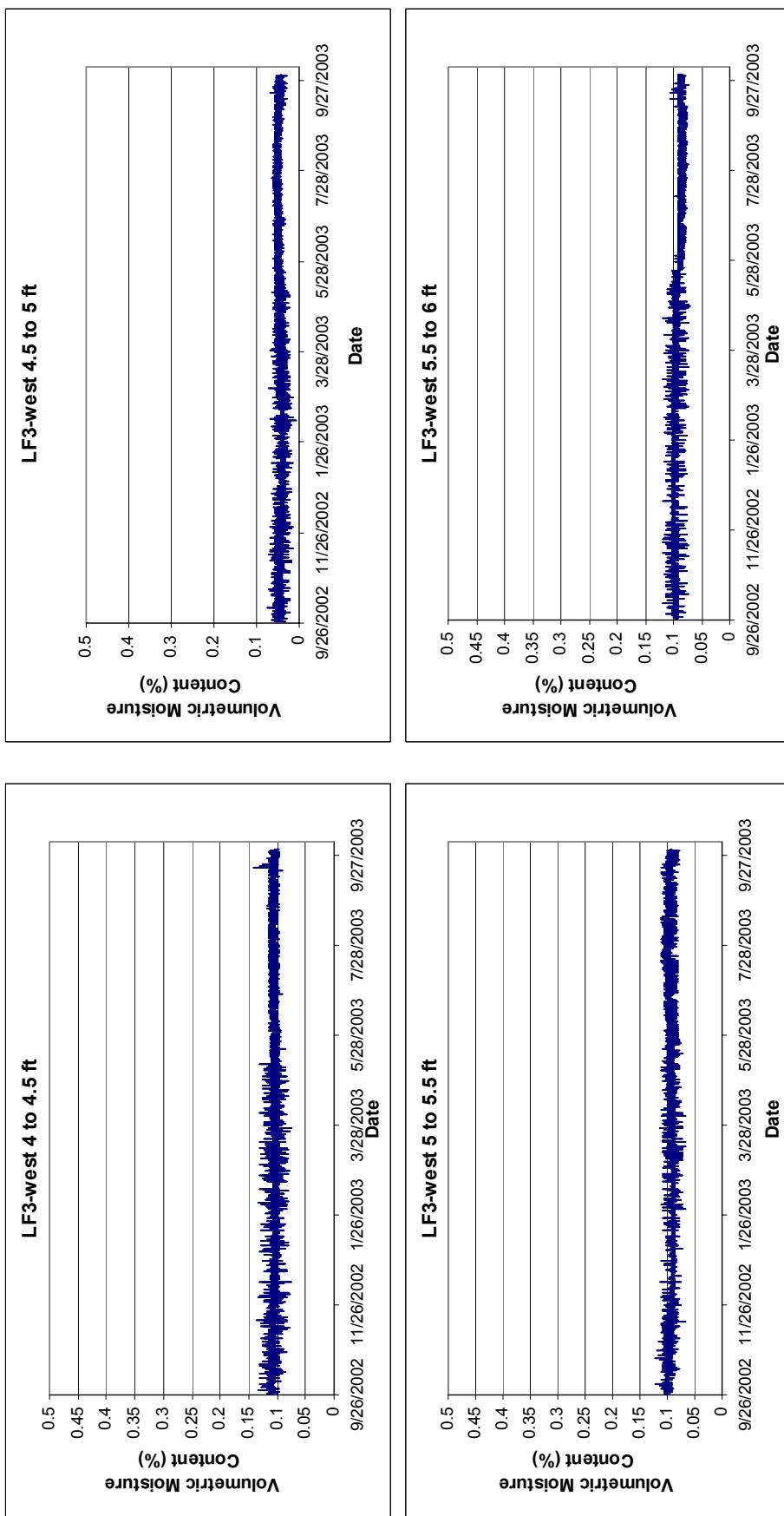


Figure B-11. (continued).

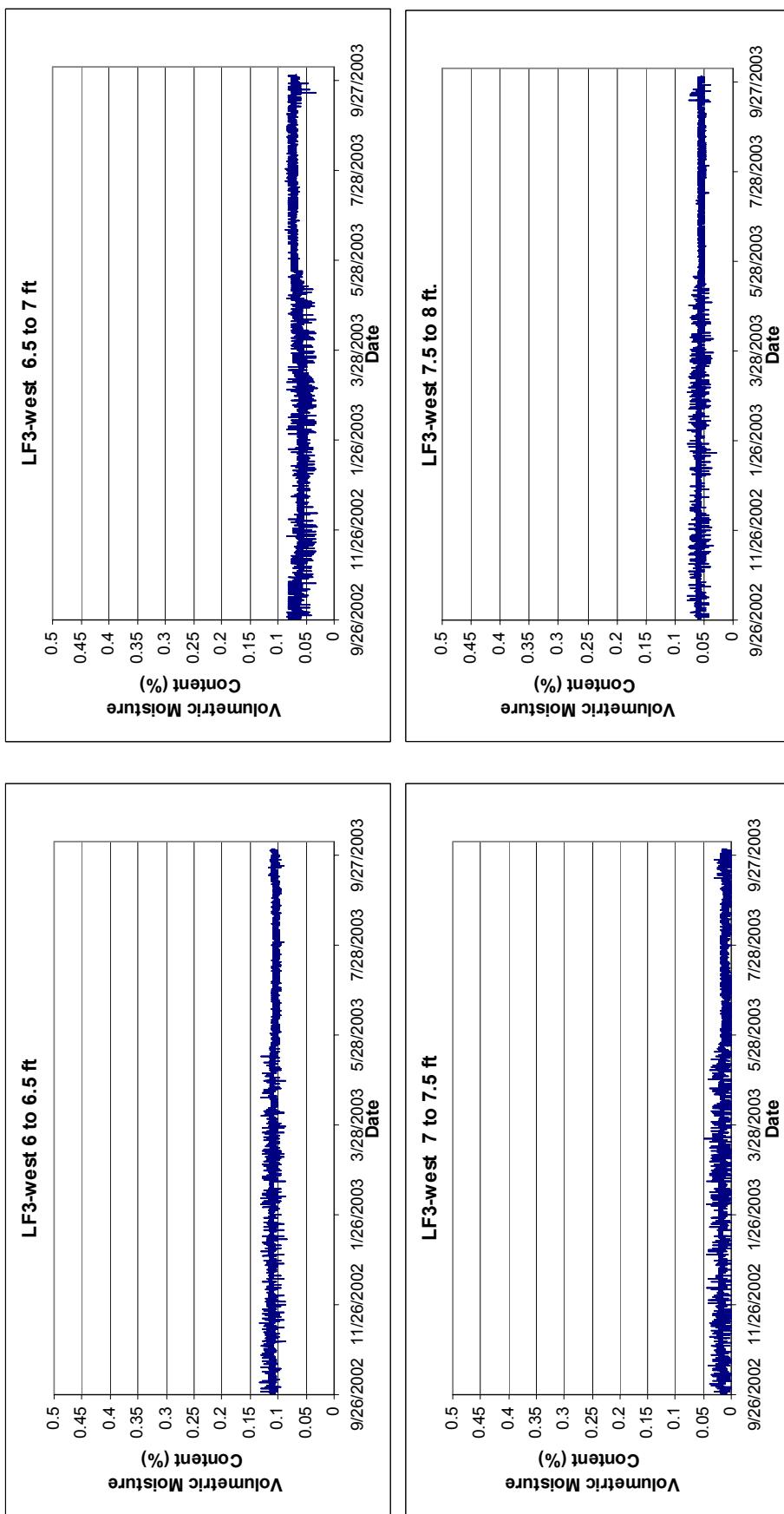


Figure B-11. (continued).

Table B-9. TDR infiltration and recharge calculations for spring 2003.^a

Location	Depth (ft)	Infiltration			Change in Moisture Content (in.)	Drainage		Change in Moisture Content (in.)		
		Moisture Content ^b		01/12/03		Moisture Content	05/11/03			
		01/12/03	05/11/03				9/29/2003			
LF3-west	0	—	0.5	0.090	0.216	0.76	0.216	0.061	0.93	
	0.5	—	1	0.051	0.193	0.86	0.193	0.052	0.85	
	1	—	1.5	0.122	0.171	0.30	0.171	0.139	0.19	
	1.5	—	2	0.121	0.108	-0.07	0.108	0.115	-0.04	
	2	—	2.5	0.196	0.210	0.09	0.210	0.212	-0.01	
	2.5	—	3	0.106	0.114	0.04	0.114	0.113	0.01	
				Total	1.84			Total	1.93	
LF3-east	0	—	0.5	0.065	0.194	0.77	0.194	0.042	0.91	
	0	—	1	0.120	0.259	0.83	0.259	0.119	0.84	
	1	—	1.5	0.198	0.218	0.12	0.218	0.197	0.13	
	1.5	—	2	0.098	0.101	0.02	0.101	0.105	-0.02	
	2	—	2.5	0.174	0.184	0.06	0.184	0.192	-0.05	
	2.5	—	3	0.108	0.126	0.11	0.126	0.109	0.10	
				Total	1.91			Total	1.91	
LF2-north	0	—	0.5	0.114	0.235	0.72	0.235	0.094	0.84	
	0.5	—	1	0.039	0.117	0.46	0.117	0.071	0.28	
	1	—	1.5	0.105	0.128	0.14	0.128	0.129	0.00	
	1.5	—	2	0.091	0.105	0.08	0.105	0.086	0.11	
	2	—	2.5	0.152	0.162	0.06	0.162	0.161	0.01	
	2.5	—	3	0.083	0.08875	0.03	0.08775	0.101	-0.08	
				Total	1.50			Total	1.16	
LF2-south	0	—	0.5	0.079875	0.146	0.40	0.146	0.061	0.51	
	0.5	—	1	0.06375	0.14925	0.51	0.14925	0.073	0.46	
	1	—	1.5	0.099708	0.125417	0.15	0.125417	0.132	-0.04	
	1.5	—	2	0.07675	0.067375	-0.06	0.067375	0.065	0.02	
	2	—	2.5	0.06925	0.076	0.04	0.076	0.064	0.07	
				Total	1.05			Total	1.02	

a. Recharge - no intervals below 4 ft with an increase in moisture content greater than 2.5%.

b. Soil moisture contents before increase in water contents and peak spring contents.

Table B-10. Depth of wetting front or water penetration from spring 2003 and recharge evaluation.

Location	Depth (ft)	Moisture Content Change > 2.5%		Moisture Content Increase Below 4 ft		Location	Depth (ft)	Moisture Content Change > 2.5%	Moisture Content Increase Below 4 ft	
		Peak change in Moisture Content ^a	Moisture Content Increase Below 4 ft	Peak Change in Moisture Content ^a	Moisture Content Increase Below 4 ft				Peak Change in Moisture Content ^a	Moisture Content Increase Below 4 ft
LF2-north	0	—	0.5	Yes	5/4/2003	LF2-south	0	—	0.5	Yes
	0.5	—	1	Yes	5/18/2003		.5	—	1	Yes
	1	—	1.5	Yes	6/4/2003		1	—	1.5	Yes
	2	—	2.5	No	NA		2	—	2.5	No
	2.5	—	3	No	NA		2.5	—	3	No
	3	—	3.5	No	NA		3	—	3.5	No
	3.5	—	4	No	NA		3.5	—	4	No
	4	—	4.5	No	NA		4	—	4.5	No
	4.5	—	5	No	NA		4.5	—	5	No
	5	—	5.5	No	NA		5	—	5.5	No
	5.5	—	6	No	NA		5.5	—	6	No
	6	—	6.5	No	NA		6	—	6.5	No
	6.5	—	7	No	NA		6.5	—	7	No
	7	—	7.5	No	NA		7	—	7.5	No
	7.5	—	8	No	NA		7.5	—	8	No
LF3-east	0	—	0.5	Yes	5/6/2003	LF3-west	0	—	0.5	Yes
	.5	—	1	Yes	5/17/2003		0.5	—	1	Yes
	1	—	1.5	Yes	6/5/2003		1	—	1.5	Yes
	1.5	—	2	Yes	6/20/2003		1.5	—	2	No
	2	—	2.5	No	NA		2	—	2.5	No
	2.5	—	3	No	NA		2.5	—	3	No
	3	—	3.5	No	NA		3	—	3.5	No
	3.5	—	4	Yes ^b	8/24/2003		3.5	—	4	No
	4	—	4.5	No	NA		4	—	4.5	No
	4.5	—	5	No	NA		4.5	—	5	No
	5	—	5.5	No	NA		5	—	5.5	No
	5.5	—	6	No	NA		5.5	—	6	No
	6	—	6.5	No	NA		6	—	6.5	No
	6.5	—	7	No	NA		6.5	—	7	No
	7	—	7.5	No	NA		7	—	7.5	No
	7.5	—	8	No	NA		7.5	—	8	No

a. Spring snowmelt started about March 18. Peak change in moisture content dates are approximates.

b. The apparent increase in moisture is questionable due to a significant increase in instrument noise (see text for additional explanation).

NA = not applicable.

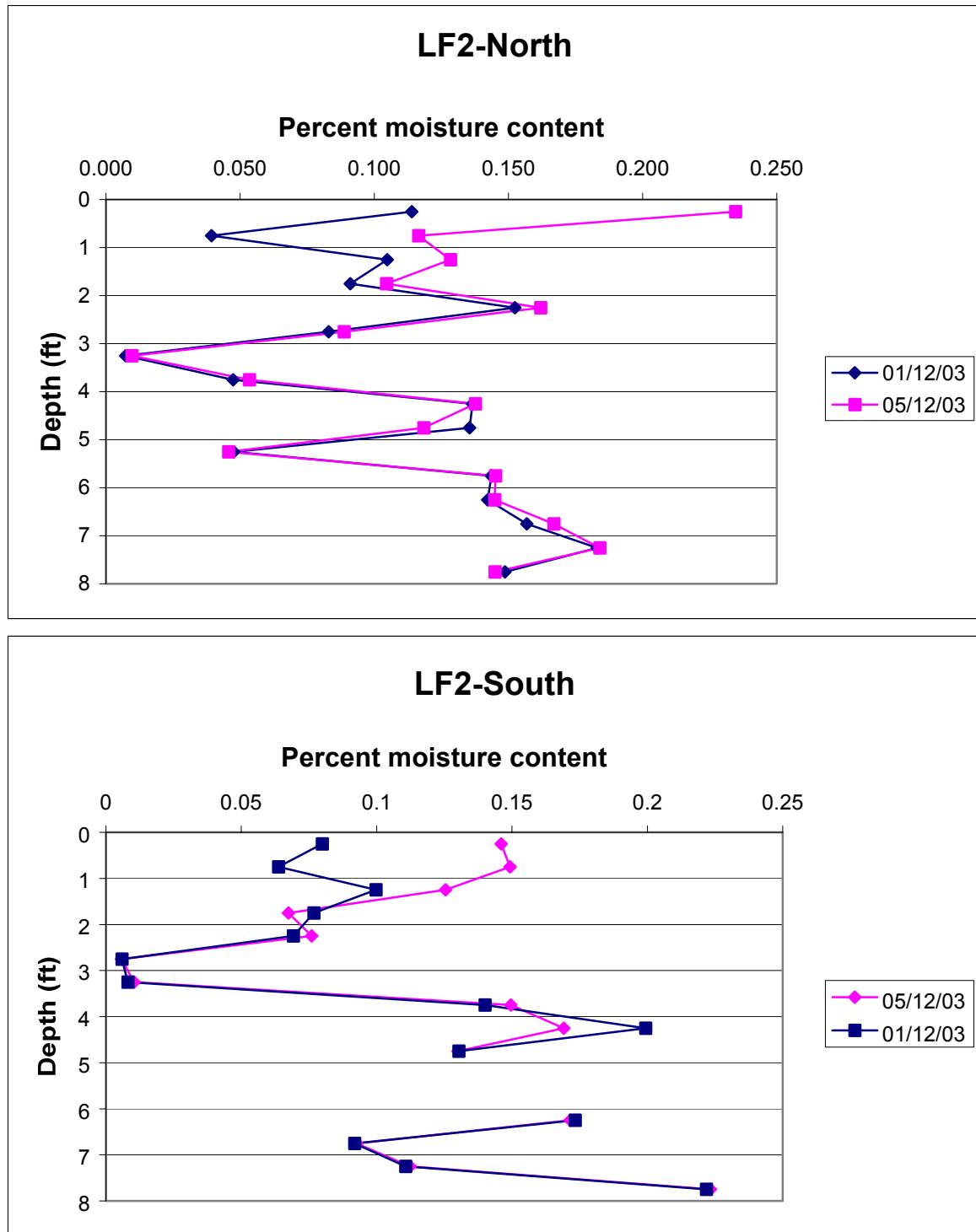


Figure B-12. Moisture profiles for Landfill II TDRs.

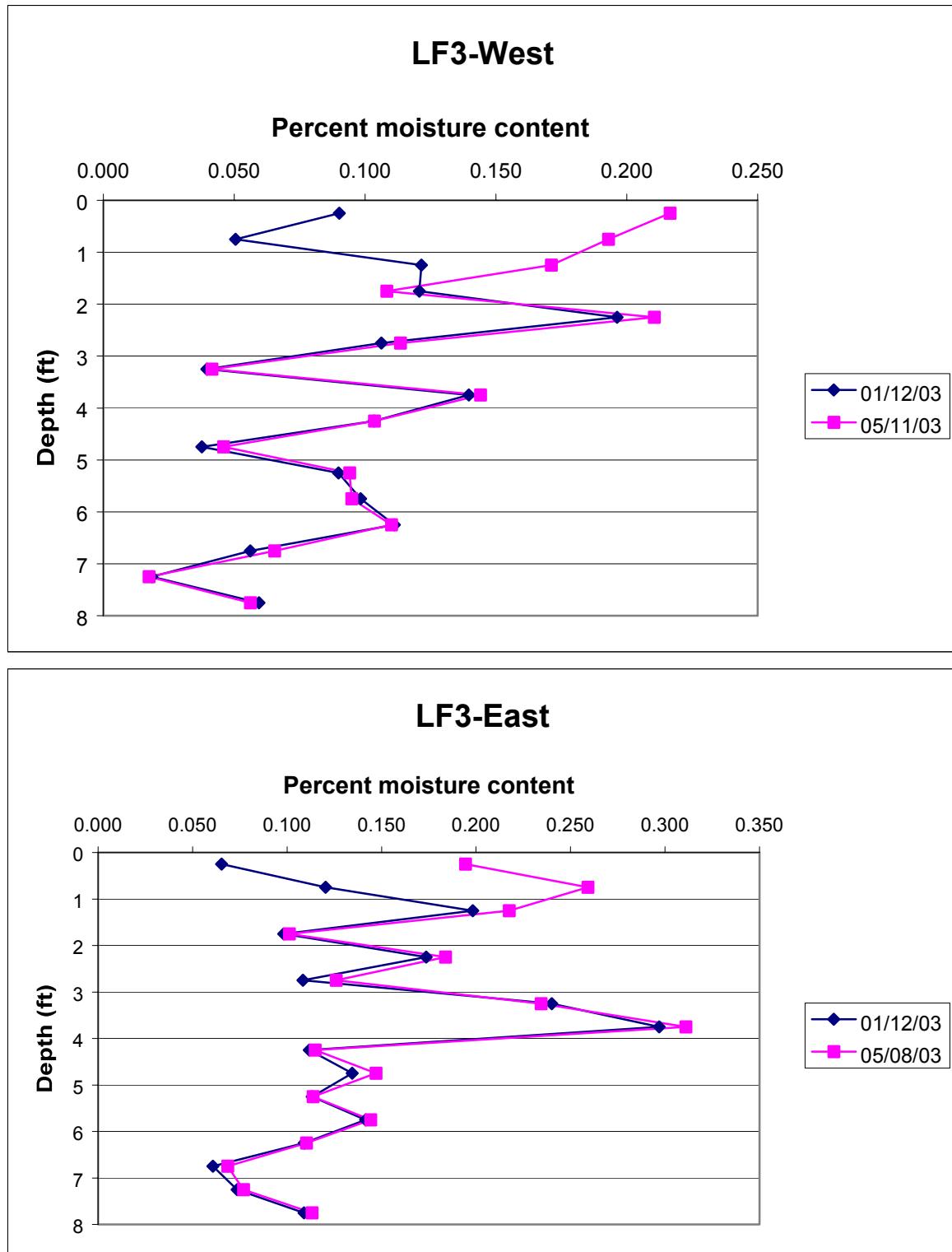


Figure B-13. Moisture profiles for Landfill III TDRs.

Table B-11. Water balance for TDR arrays.

Location	Depth (ft)	Sep-02	Sep-03	Change in Water Content ^a				Change in Water Content ^a			
				0–8 ft	4–8 ft	0–2 ft	Location	Depth (ft)	Sep-02	Sep-03	0–8 ft
LF2-north	0	-	0.5	0.107	0.094	-0.075	-0.075	LF2-south	0	-	0.5
0.5	-	1	0.070	0.070	0.002	0.002	0.5	-	0.066	0.073	0.040
1	-	1.5	0.126	0.129	0.015	0.015	1	-	1.5	0.121	0.132
1.5	-	2	0.100	0.086	-0.082	-0.082	1.5	-	2	0.077	0.065
2	-	2.5	0.167	0.161	-0.039	-0.039	2	-	2.5	0.082	0.064
2.5	-	3	0.100	0.101	0.010	0.010	2.5	-	3	0.009	0.054
3	-	3.5	0.011	0.014	0.019	0.019	3	-	3.5	0.016	0.037
3.5	-	4	0.057	0.053	-0.026	-0.026	3.5	-	4	0.152	0.114
4	-	4.5	0.143	0.130	-0.075	-0.075	4	-	4.5	0.175	0.159
4.5	-	5	0.125	0.150	0.150	0.150	4.5	-	5	0.139	0.165
5	-	5.5	0.046	0.064	0.105	0.105	5	-	5.5	-	-
5.5	-	6	0.149	0.126	-0.140	-0.140	5.5	-	6	-	-
6	-	6.5	0.141	0.140	-0.004	-0.004	6	-	6.5	0.184	0.179
6.5	-	7	0.139	0.202	0.378	0.378	6.5	-	7	0.099	0.117
7	-	7.5	0.189	0.204	0.091	0.091	7	-	7.5	0.117	0.132
7.5	-	8	0.145	0.131	-0.083	-0.083	7.5	-	8	0.220	0.212
		Totals	0.25	0.42	-0.14	-0.14			Totals	0.27	0.19
LF3-east	0	-	0.5	0.056	0.042	-0.085	-0.085	LF3-west	0	-	0.5
0.5	-	1	0.143	0.119	-0.144	-0.144	0.5	-	1	0.0644	0.052
1	-	1.5	0.216	0.197	-0.119	-0.119	1	-	1.5	0.1494	0.139
1.5	-	2	0.107	0.105	-0.010	-0.010	1.5	-	2	0.1251	0.115
2	-	2.5	0.197	0.192	-0.029	-0.029	2	-	2.5	0.2239	0.212
2.5	-	3	0.115	0.109	-0.032	-0.032	2.5	-	3	0.118	0.113
3	-	3.5	0.244	0.231	-0.081	-0.081	3	-	3.5	0.0437	0.034
3.5	-	4	0.377	0.403	0.158	0.158	3.5	-	4	0.1465	0.141
4	-	4.5	0.107	0.120	0.081	0.006	4	-	4.5	0.1103	0.104
4.5	-	5	0.143	0.148	0.029	-0.008	4.5	-	5	0.0475	0.045
5	-	5.5	0.104	0.107	0.015	-0.009	5	-	5.5	0.1002	0.089
5.5	-	6	0.114	0.122	0.051	0.007	5.5	-	6	0.0946	0.087
6	-	6.5	0.110	0.122	0.075	-0.060	6	-	6.5	0.1108	0.106
6.5	-	7	0.065	0.069	0.024	-0.044	6.5	-	7	0.0682	0.073
7	-	7.5	0.078	0.074	-0.026	-0.085	7	-	7.5	0.0153	0.009
7.5	-	8	0.115	0.110	-0.027	-0.038	7.5	-	8	0.0582	0.056
		Totals	-0.12	-0.23	-0.36	-0.36			Totals	-0.67	-0.22
											-0.25

a. Change in water content is equal to change in moisture content multiplied by the 6 in. length of each TDR segment.